State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Wausau Service Center
5301 Rib Mountain Drive
Wausau WI 54401

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

February 28, 2013

BRRTS#02-50-553760

COPY

Mr. John Bale
Flint Hills Resources Pine Bend, LLC
P.O. Box 64596
St. Paul, MN 55164-0596

Subject: No Further Action, Ditch Release, Flint Hill Resources Pine Bend Junction City Terminal, Town of Carson, Wisconsin

Dear Mr. Bale:

On January 3, 2013, the Wisconsin Department of Natural Resources received the No Further Action Report, Ditch Assessment Flint Hills Resources Pine Bend LLC submitted by Tetra Tech. I have reviewed the document and file and concur that the environment has been restored to the extent practicable as provided in chapter NR. 708.09 Wisconsin Administrative Code. Therefore the response to this release has been completed and the Department of Natural Resources is requiring no further action at this time.

We appreciate your efforts to protect and restore the environment at this site. If you have questions regarding this No Further Action determination, please contact me at 715-359-6514.

Sincerely,

Lisa Gutknecht

Lisa Gutknecht
Remediation & Redevelopment Program

c: Bill Evans, WDNR – Eau Claire (e-copy)
Greg Aldrian, Tetra Tech (e-copy)

TETRA TECH

December 6, 2012

Wisconsin Department of Natural Resources
Attn: Ms. Lisa Gutknecht
5310 Rib Mountain Drive
Wausau, WI 54401

SUBJECT: **No Further Action Report (NFA)**
Ditch Assessment
Flint Hills Resources Pine Bend, LLC
Junction City, Wisconsin
WDNR BRRTS #02-50-553760
Tetra Tech Project # 114-340724

Dear Ms. Gutknecht:

Tetra Tech, Inc. (Tetra Tech) completed the interim action activities on the west property border/ditch area at Flint Hills Resources Pine Bend, LLC's (FHR's) fuel terminal located in Junction City, Wisconsin. The assessment included surface water sampling, subsurface soil and groundwater sample collection and interim action to prevent groundwater from seeping into the ditch. This work was performed as part of overall maintenance of the facility, and was completed in compliance with WDNR guidelines and requirements.

Based on WDNR's review of interim actions taken at this site, it was determined this site could be closed with a NR708 No Further Action Letter. A $250.00 check to cover WDNR review fees is included with this report.

If you have any questions please feel free to contact me at (715) 355-4180.

Sincerely,
TETRA TECH

Gregory M. Aldrian, P.G.
Program Manager

MAM/GMA:mam:prz
S:\ENV\KOCH_FHR\JUNCTION CITY\Ditch Project\2009\JCT Ditch Env Assesmnt Rept-Draft 01-12-10.doc

cc: Flint Hills Resources Pine Bend, LLC
Attn: Mr. Jim Polum
2267 County Road HH
Junction City, WI 54443

Flint Hills Resources Pine Bend, LLC
Attn: Mr. John Bale
P.O. Box 64596
St. Paul, MN 55164-0596

Tetra Tech
5404 Alderson Street, Suite 100, Schofield, WI 54476
Tel 715.355.4180 Fax 715.359.2853 www.tetratech.com

TETRA TECH

No Further Action Report

Ditch Assessment
FHR – Junction City Fuel Terminal
Junction City, Wisconsin

Prepared for:

Flint Hills Resources Pine Bend, LLC

Attn: Mr. John Bale
P.O. Box 64596
St. Paul, MN 55164-0596
651.480.3966

Prepared by:

Tetra Tech

5404 Alderson Street, Suite 100
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715.355.4180
Fax: 715.359.2853

Tetra Tech Project No. 114-340724

December 6, 2012

complex world

CLEAR SOLUTIONS™

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TABLES

FIGURES

1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech), completed the assessment on a portion of the drainage ditch located on the western property boundary which comprises the east side of State Highway "34" at Flint Hills Resources Pine Bend, LLC's (FHR's) fuel terminal located in Junction City, Wisconsin and completed an interim action report dated June 14, 2012 for WDNR review. That report detailed the initial investigation, interim actions [NR708.07(21)] and follow-up verification surface water sampling in the ditch. That work was performed as part of overall maintenance of the facility in conjunction with the Wisconsin Department of Transportation (WDOT) and was completed in compliance with Wisconsin Department of Natural Resources (WDNR) guidelines and requirements.

2.0 BACKGROUND

On April 25, 2008, the Junction City Terminal Manager received notification from a WDOT Environmental Coordinator that a project manager had been walking the site as part of the STH "10" reconstruction, and had noticed "rust colored standing water" accompanied by "dead vegetation" in the drainage ditch immediately west of the FHR facility requesting immediate notification to the WDNR. After additional correspondence between FHR personnel and WDOT representatives, later that day Tetra Tech was directed to collect a surface water sample in the area identified as potentially affected in the early afternoon of April, 25, 2008. Upon receipt of analytical results on April 28, 2008 indicating impact by volatile organics, verification sampling was performed, collecting an additional surface water sample in the original location with an additional downstream sample obtained where the drainage exits FHR property. The WDNR was contacted on April 28, 2008 by FHR to report the incident as a possible spill, providing results from the April 25, 2008 sampling event. Results of the second sampling event were received on April 29th which again indicated volatile organics were present in surface water in the same location as the original sample, however downstream sampling results indicated surface water in this area remained unaffected. Results again were forwarded to the WDNR which prompted discussion with FHR as to potential source(s) of the identified impact, including prospective options for mitigation including the potential of placing rip-rap ballast rock in the ditch to facilitate aeration.

However, during the course of the on-going investigation, reconstruction of the STH "10" and "34" interchange was progressing, ultimately including the ditch area adjoining the FHR facility which was subject to re-grading, matting and reseeding with the work completed in August 2008. Anticipated mowing/maintenance operations in the newly re-vegetated ditch to be performed by the WDOT negated the option of the suggested stone rip-rap. Consequently the WDNR recommended two additional sampling events be performed, and based on these results potentially a "No Further Action" request could be submitted for regulatory review and project closure.

On October 8, 2008 the ditch sampling was again performed in the two prescribed locations. Results indicated volatile organics were not detected in either sample above respective Method Detection Levels (MDLs). A subsequent sampling event was performed on November 11, 2008 complying with regulatory recommendations in obtaining sequential samples to substantiate case closure objectives. However, results of the November sampling event again indicated the presence of volatile organics.

Consequently, additional sampling was recommended for the following month but with the onset of winter, had to be delayed, with WDNR concurrence, until spring thaw with sample collection completed on April 17, 2009. Results from the spring 2009 sampling event indicated volatile organics were not detected above the MDL in the original or downstream ditch sample. Table 1 includes all surface water results.

During the spring/early summer of 2009, FHR and Tetra Tech in conjunction with WDNR personnel formulated a plan for remedial action that included raising the elevation and re-grading the ditch area with compacted clay soil. This remedial action was proposed as the surface water impacts are believed to be the result of seepage of impacted groundwater from a historical closed release site that began to occur due to a high water table which was further enabled by the WDOT re-grading that lowered the ditch elevation. During the final planning and approval stages of the proposed action, the WDNR reclassified the project necessitating it be closed in accordance with s. NR 726, requiring more extensive remedial investigation/site assessment prior to the implementation of remedial action and/or case closure request submittal.

As a result, Tetra Tech prepared a site investigation plan and upon regulatory concurrence and approval dated June 22, 2009, performed an environmental site assessment on October 13, 2009 (NR716). The investigation included obtaining an additional surface water sample and advancing Geoprobes in the ditch and highway shoulder/right-of-way areas to collect soil and groundwater samples for analysis. The results of these findings, including site figures, soil boring logs, tabularized historical sampling data, and chemical analysis of soil and water sampling reports were provided in Tetra Tech's Ditch Assessment Report dated April 14, 2010. Based upon results of the October 13, 2009 investigation, Tetra Tech on behalf of FHR, recommended in their April 14, 2010 report, to raise the elevation of the ditch approximately three feet using compacted clay soil to prevent groundwater from entering the ditch as an interim action in anticipation it will be the final response action [(NR708.07(4)].

3.0 INTERIM ACTION ACTIVITIES

To implement the interim action to prevent groundwater from entering the ditch, the following activities and tasks were conducted in accordance with the July 20, 2011 WDNR approved remedial actions.

Tetra Tech selected SGS Environmental Contractor, LLC (SGS) of Merrill, Wisconsin to provide materials and equipment to conduct the field work for this project. Tetra Tech worked with SGS to prepare a traffic control plan and obtain all required WDOT permits.

On September 12, 2011, Tetra Tech and SGS mobilized to the site to implement interim action requirements. After completing FHR's EH&S Safe Work Permit Requirements, signs, barrels and cones were set up around the work zone perimeter to fulfill WDOT permit requirements.

The first phase of the project required stripping all topsoil from the work area and disking the native soil to create a bond between the native soil and clay material used to raise the elevation of the ditch. During the stripping phase of the project, the seeps became very apparent with the vegetation removed. The seep areas were marked by placing ribbon along the fence so these areas could be carefully observed during the placement of clay fill and after the interim action was completed.

After the grass and topsoil were removed, clay fill was placed in eight inch lifts and compacted starting at the truck exit and progressing south approximately 200 feet (see Figure 1). Fill was placed to a depth of three feet. During the placement and compaction of the clay, the areas of the previous seeps were continually monitored to make sure clay in these areas was not showing signs of becoming saturated while increasing the elevation of the ditch.

After the three feet of clay was installed and it was verified the seeps were stopped, six inches of topsoil was placed over the clay fill. The topsoil was then matted, seeded and mulched for erosion control. Hay bales were also placed at the south side of the project for additional erosion control measures.

4.0 VERIFICATON MONITORING

After completing the interim action activities the week of September 12, 2011, weekly site visits were made for the next four weeks to verify the seeps had not returned and erosion control measures were working. Site visits verified the ditch was dry with no indication of seeps along the eastern bank or bottom of the ditch [(NR709.09(H)].

On September 19, 29 and October 26, 2011 surface water samples were collected at the north and south locations after previous rain events and analyzed for PVOCs. All results for both the north and south sampling locations were below the level of detection as indicated on Table 1.

5.0 CONCLUSIONS

Based on observations made during and after interim action activities along with verification sampling of surface water, it is apparent the interim action was successful at preventing impacted groundwater from entering the ditch and mixing with surface water [(NR708.07(4)].

6.0 RECOMMENDATIONS

Tetra Tech, on behalf of FHR, recommends that the interim actions taken at this site be considered the final response action and the site be considered for no further response action (NR708.09).

TETRA TECH

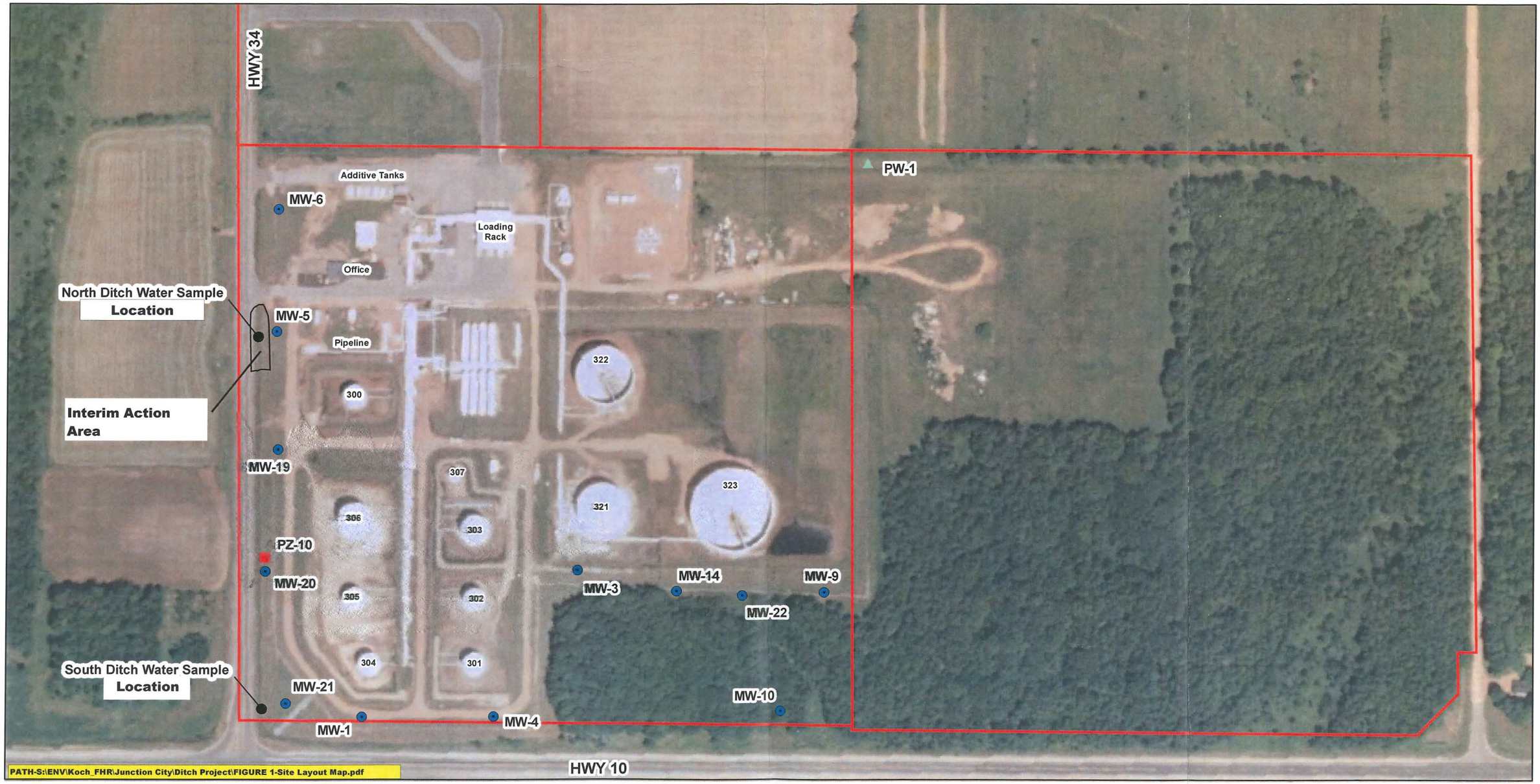
This report was prepared by:

Gregory M. Aldrian, P.G.
Program Manager

1/3/13
Dated

"I, Gregory M. Aldrian, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

CAW/MAM/GMA:caw/mam:prz
S:\ENV\KOCH_FHR\JUNCTION CITY\Ditch Project\2009\JCT Ditch No Further Action Rept-09-26-12.doc



2009

Legend

- Abandoned Well
- Active Monitoring Well
- Active Piezometer
- Potable Well
- Property Boundary
- Ditch Regrade Area

0 110 220 Feet

N W E S

Figure 1

Site Layout Map
Junction City Fuel Terminal
Flint Hills Resources Pine Bend, LLC.
Portage County, Wisconsin

TETRA TECH

TABLE 1
CHEMICAL ANALYSIS OF SURFACE WATER
HWY 34 DITCH WATER
FLINT HILLS RESOURCES PINE BEND, LLC
JUNCTION CITY, WISCONSIN
Tetra Tech #114-340632

Sample Identification	North Location (50-ft southeast of MW-5 and 25-ft north of the pipeline)								NR 140	NR 140
Date Sampled	4/25/2008	4/28/2008	10/8/2008	11/12/2008	4/16/2009	9/19/2011	9/29/2011	10/26/2011	PAL	ES
Benzene	**66.4**	**18**	<0.23	**89.3**	<0.23	**<7.8**	<0.39	<0.39	0.5	5
Ethylbenzene	11.8	ND	<0.40	14	<0.40	<8.3	<0.41	<0.41	140	700
Methyl-tert-butyl ether	3.52	ND	<0.36	2.2	<0.36	<7.6	<0.38	<0.38	12	60
Toluene	2.65	ND	<0.36	1.9	<0.36	<8.3	<0.42	<0.42	200	1000
Trimethylbenzene	11.24	ND	<0.79	5.08	<0.79	<16.5	<0.83	<0.83	96	480
Xylene	15.92	ND	<1.10	10.55	<1.10	<25.0	<1.25	<1.25	1000	10000
					Pre-Interim Action	Post-Interim Action				

Sample Identification	South Location (corner of Hwy 34 and Hwy 10)								NR 140	NR 140
Date Sampled	4/25/2008	4/28/2008	10/8/2008	11/12/2008	4/16/2009	9/19/2011	9/29/2011	10/26/2011	PAL	ES
Benzene	---	<0.31	<0.23	<0.23	<0.23	<0.39	<0.39	<0.39	0.5	5
Ethylbenzene	---	2.96	<0.40	<0.40	<0.40	<0.41	<0.41	<0.41	140	700
Methyl-tert-butyl ether	---	4.33	<0.36	<0.36	<0.36	<0.38	<0.38	<0.38	12	60
Toluene	---	1.03	<0.36	<0.36	<0.36	<0.42	<0.42	<0.42	200	1000
Trimethylbenzene	---	2.664	<0.79	<0.79	<0.79	<0.83	<0.83	<0.83	96	480
Xylene	---	5.6	<1.10	<1.10	<1.10	<1.25	<1.25	<1.25	1000	10000
					Pre-Interim Action	Post-Interim Action				

All concentrations in ppl (ug/L)
--- = Location not sampled
PAL = WDNR Preventative Action Limit
ES = WDNR Enforcement Standard
ND = Not Detected
< = Parameter was not detected and if present is less than the limit of detection reported

0.58 = concentration > NR 140 PAL

66.4 = concentration > NR 140 ES

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 114-340 656.100 FHR JCT CITY S
Pace Project No.: 4059342

Sample: MW-5 **Lab ID: 4059342008** Collected: 04/24/12 13:35 Received: 04/26/12 09:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Anthracene	**<1.0**	ug/L	18.0	1.0	400	04/27/12 12:00	05/01/12 13:58	120-12-7	
Benzo(a)anthracene	**<1.7**	ug/L	18.0	1.7	400	04/27/12 12:00	05/01/12 13:58	56-55-3	
Benzo(a)pyrene	**<1.7**	ug/L	18.0	1.7	400	04/27/12 12:00	05/01/12 13:58	50-32-8	
Benzo(b)fluoranthene	**<1.8**	ug/L	18.0	1.8	400	04/27/12 12:00	05/01/12 13:58	205-99-2	
Benzo(g,h,i)perylene	**<2.1**	ug/L	18.0	2.1	400	04/27/12 12:00	05/01/12 13:58	191-24-2	
Benzo(k)fluoranthene	**<1.9**	ug/L	18.0	1.9	400	04/27/12 12:00	05/01/12 13:58	207-08-9	
Chrysene	**<1.8**	ug/L	18.0	1.8	400	04/27/12 12:00	05/01/12 13:58	218-01-9	
Dibenz(a,h)anthracene	**<3.6**	ug/L	18.0	3.6	400	04/27/12 12:00	05/01/12 13:58	53-70-3	
Fluoranthene	**<1.3**	ug/L	18.0	1.3	400	04/27/12 12:00	05/01/12 13:58	206-44-0	
Fluorene	**<1.2**	ug/L	18.0	1.2	400	04/27/12 12:00	05/01/12 13:58	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.1**	ug/L	18.0	2.1	400	04/27/12 12:00	05/01/12 13:58	193-39-5	
1-Methylnaphthalene	**26.1**	ug/L	18.0	1.8	400	04/27/12 12:00	05/01/12 13:58	90-12-0	
2-Methylnaphthalene	**33.7**	ug/L	18.0	1.8	400	04/27/12 12:00	05/01/12 13:58	91-57-6	
Naphthalene	**79.3**	ug/L	18.0	1.8	400	04/27/12 12:00	05/01/12 13:58	91-20-3	
Phenanthrene	**<3.3**	ug/L	18.0	3.3	400	04/27/12 12:00	05/01/12 13:58	85-01-8	
Pyrene	**<1.7**	ug/L	18.0	1.7	400	04/27/12 12:00	05/01/12 13:58	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	0	%.	28-130		400	04/27/12 12:00	05/01/12 13:58	321-60-8	S4
Terphenyl-d14 (S)	0	%.	49-130		400	04/27/12 12:00	05/01/12 13:58	1718-51-0	S4
8260 MSV	Analytical Method: EPA 8260								
Benzene	**1660**	ug/L	20.0	8.2	20		04/27/12 14:47	71-43-2	
Bromobenzene	**<16.4**	ug/L	20.0	16.4	20		04/27/12 14:47	108-86-1	
Bromochloromethane	**<19.4**	ug/L	20.0	19.4	20		04/27/12 14:47	74-97-5	
Bromodichloromethane	**<11.2**	ug/L	20.0	11.2	20		04/27/12 14:47	75-27-4	
Bromoform	**<18.8**	ug/L	20.0	18.8	20		04/27/12 14:47	75-25-2	
Bromomethane	**<18.2**	ug/L	20.0	18.2	20		04/27/12 14:47	74-83-9	
n-Butylbenzene	**28.0**	ug/L	20.0	18.6	20		04/27/12 14:47	104-51-8	
sec-Butylbenzene	**<17.8**	ug/L	100	17.8	20		04/27/12 14:47	135-98-8	
tert-Butylbenzene	**<19.4**	ug/L	20.0	19.4	20		04/27/12 14:47	98-06-6	
Carbon tetrachloride	**<9.8**	ug/L	20.0	9.8	20		04/27/12 14:47	56-23-5	
Chlorobenzene	**<8.2**	ug/L	20.0	8.2	20		04/27/12 14:47	108-90-7	
Chloroethane	**<19.4**	ug/L	20.0	19.4	20		04/27/12 14:47	75-00-3	
Chloroform	**<26.0**	ug/L	100	26.0	20		04/27/12 14:47	67-66-3	
Chloromethane	**<4.8**	ug/L	20.0	4.8	20		04/27/12 14:47	74-87-3	
2-Chlorotoluene	**<17.0**	ug/L	20.0	17.0	20		04/27/12 14:47	95-49-8	
4-Chlorotoluene	**<14.8**	ug/L	20.0	14.8	20		04/27/12 14:47	106-43-4	
1,2-Dibromo-3-chloropropane	**<33.6**	ug/L	100	33.6	20		04/27/12 14:47	96-12-8	
Dibromochloromethane	**<16.2**	ug/L	20.0	16.2	20		04/27/12 14:47	124-48-1	
1,2-Dibromoethane (EDB)	**<11.2**	ug/L	20.0	11.2	20		04/27/12 14:47	106-93-4	
Dibromomethane	**<12.0**	ug/L	20.0	12.0	20		04/27/12 14:47	74-95-3	
1,2-Dichlorobenzene	**<16.6**	ug/L	20.0	16.6	20		04/27/12 14:47	95-50-1	
1,3-Dichlorobenzene	**<17.4**	ug/L	20.0	17.4	20		04/27/12 14:47	541-73-1	
1,4-Dichlorobenzene	**<19.0**	ug/L	20.0	19.0	20		04/27/12 14:47	106-46-7	
Dichlorodifluoromethane	**<19.8**	ug/L	20.0	19.8	20		04/27/12 14:47	75-71-8	
1,1-Dichloroethane	**<15.0**	ug/L	20.0	15.0	20		04/27/12 14:47	75-34-3	

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ANALYTICAL RESULTS

Project: 114-340 656.100 FHR JCT CITY S
Pace Project No.: 4059342

Sample: MW-5 **Lab ID: 4059342008** Collected: 04/24/12 13:35 Received: 04/26/12 09:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichloroethane	**<7.2**	ug/L	20.0	7.2	20		04/27/12 14:47	107-06-2	
1,1-Dichloroethene	**<11.4**	ug/L	20.0	11.4	20		04/27/12 14:47	75-35-4	
cis-1,2-Dichloroethene	**<16.6**	ug/L	20.0	16.6	20		04/27/12 14:47	156-59-2	
trans-1,2-Dichloroethene	**<17.8**	ug/L	20.0	17.8	20		04/27/12 14:47	156-60-5	
1,2-Dichloropropane	**<9.8**	ug/L	20.0	9.8	20		04/27/12 14:47	78-87-5	
1,3-Dichloropropane	**<12.2**	ug/L	20.0	12.2	20		04/27/12 14:47	142-28-9	
2,2-Dichloropropane	**<12.4**	ug/L	20.0	12.4	20		04/27/12 14:47	594-20-7	
1,1-Dichloropropene	**<15.0**	ug/L	20.0	15.0	20		04/27/12 14:47	563-58-6	
cis-1,3-Dichloropropene	**<4.0**	ug/L	20.0	4.0	20		04/27/12 14:47	10061-01-5	
trans-1,3-Dichloropropene	**<3.8**	ug/L	20.0	3.8	20		04/27/12 14:47	10061-02-6	
Diisopropyl ether	**<15.2**	ug/L	20.0	15.2	20		04/27/12 14:47	108-20-3	
Ethylbenzene	**657**	ug/L	20.0	10.8	20		04/27/12 14:47	100-41-4	
Hexachloro-1,3-butadiene	**<13.4**	ug/L	100	13.4	20		04/27/12 14:47	87-68-3	
Isopropylbenzene (Cumene)	**26.8**	ug/L	20.0	11.8	20		04/27/12 14:47	98-82-8	
p-Isopropyltoluene	**<13.4**	ug/L	20.0	13.4	20		04/27/12 14:47	99-87-6	
Methylene Chloride	**<8.6**	ug/L	20.0	8.6	20		04/27/12 14:47	75-09-2	
Methyl-tert-butyl ether	**<12.2**	ug/L	20.0	12.2	20		04/27/12 14:47	1634-04-4	
Naphthalene	**158**	ug/L	100	17.8	20		04/27/12 14:47	91-20-3	
n-Propylbenzene	**98.9**	ug/L	20.0	16.2	20		04/27/12 14:47	103-65-1	
Styrene	**<17.2**	ug/L	20.0	17.2	20		04/27/12 14:47	100-42-5	
1,1,1,2-Tetrachloroethane	**<18.4**	ug/L	20.0	18.4	20		04/27/12 14:47	630-20-6	
1,1,2,2-Tetrachloroethane	**<4.0**	ug/L	20.0	4.0	20		04/27/12 14:47	79-34-5	
Tetrachloroethene	**<9.0**	ug/L	20.0	9.0	20		04/27/12 14:47	127-18-4	
Toluene	**348**	ug/L	20.0	13.4	20		04/27/12 14:47	108-88-3	
1,2,3-Trichlorobenzene	**<14.8**	ug/L	20.0	14.8	20		04/27/12 14:47	87-61-6	
1,2,4-Trichlorobenzene	**<19.4**	ug/L	100	19.4	20		04/27/12 14:47	120-82-1	
1,1,1-Trichloroethane	**<18.0**	ug/L	20.0	18.0	20		04/27/12 14:47	71-55-6	
1,1,2-Trichloroethane	**<8.4**	ug/L	20.0	8.4	20		04/27/12 14:47	79-00-5	
Trichloroethene	**<9.6**	ug/L	20.0	9.6	20		04/27/12 14:47	79-01-6	
Trichlorofluoromethane	**<15.8**	ug/L	20.0	15.8	20		04/27/12 14:47	75-69-4	
1,2,3-Trichloropropane	**<19.8**	ug/L	20.0	19.8	20		04/27/12 14:47	96-18-4	
1,2,4-Trimethylbenzene	**428**	ug/L	20.0	19.4	20		04/27/12 14:47	95-63-6	
1,3,5-Trimethylbenzene	**117**	ug/L	20.0	16.6	20		04/27/12 14:47	108-67-8	
Vinyl chloride	**<3.6**	ug/L	20.0	3.6	20		04/27/12 14:47	75-01-4	
m&p-Xylene	**1010**	ug/L	40.0	36.0	20		04/27/12 14:47	179601-23-1	
o-Xylene	**253**	ug/L	20.0	16.6	20		04/27/12 14:47	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	89	%.	70-130		20		04/27/12 14:47	460-00-4	
Dibromofluoromethane (S)	96	%.	70-130		20		04/27/12 14:47	1868-53-7	
Toluene-d8 (S)	104	%.	70-130		20		04/27/12 14:47	2037-26-5	

Aldrian, Greg

From: Anderson, Carrie
Sent: Thursday, June 28, 2012 10:32 AM
To: Hanson, David L - DNR
Cc: Aldrian, Greg
Subject: RE: Check sent to WDNR

David,
The $500 is for technical assistance.

Carrie

From: Hanson, David L - DNR [mailto:David.Hanson@wisconsin.gov]
Sent: Thursday, June 28, 2012 10:30 AM
To: Anderson, Carrie
Cc: Aldrian, Greg
Subject: RE: Check sent to WDNR

Is Tetra Tech going to be requesting technical assistance from the DNR or asking us to review a site investigation workplan? I'm not sure what you mean by "interim action".

Thanks,

David

David L. Hanson
Environmental Program Associate
Southeast Region Headquarters
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King Dr.
Milwaukee, WI 53212
Phone: (414) 263-8680
Fax: (414) 263-8550
E-mail: david.hanson@wisconsin.gov

Website: dnr.wi.gov

Find us on Facebook: www.facebook.com/WIDNR

From: Anderson, Carrie [mailto:Carrie.Anderson@tetratech.com]
Sent: Thursday, June 28, 2012 9:47 AM
To: Hanson, David L - DNR
Cc: Aldrian, Greg
Subject: FW: Check sent to WDNR

Dave,

Thank you for returning my call.
The Tetra Tech check received for $500 (check#1560275) should be applied to the FHR Interim Action WDNR BRRTS# 02-50-553760.
Please contact our office if you need any additional information. Thank you for your help.

TETRA TECH

June 14, 2012

Flint Hills Resources Pine Bend, LLC
Attn: Mr. John Bale
P.O. Box 64596
St. Paul, MN 55164-0596

SUBJECT: **Interim Action Report**
Ditch Assessment
Flint Hills Resources Pine Bend, LLC
Junction City, Wisconsin
WDNR BRRTS #02-50-553760
Tetra Tech Project # 114-340632

Dear Mr. Bale:

Tetra Tech, Inc. (Tetra Tech) completed the interim action activities on the west property border/ditch area at Flint Hills Resources Pine Bend, LLC's (FHR's) fuel terminal located in Junction City, Wisconsin. The assessment included surface water sampling, subsurface soil and groundwater sample collection and interim action to prevent groundwater from seeping into the ditch. This work was performed as part of overall maintenance of the facility, and was completed in compliance with WDNR guidelines and requirements.

In addition, on behalf of FHR, we are forwarding a copy of this report to Ms. Lisa Gutknecht, WDNR project manager for the Junction City Terminal. A $500.00 check to cover WDNR review fees is included with the WDNR copy of the report.

If you have any questions please feel free to contact me at (715) 355-4180.

Sincerely,
TETRA TECH

Gregory M. Aldrian, P.G.
Program Manager

MAM/GMA:mam:prz
S:\ENV\KOCH_FHR\JUNCTION CITY\Ditch Project\2009\JCT Ditch Env Assesmnt Rept-Draft 01-12-10.doc

cc: Flint Hills Resources, LP
Attn: Mr. Chad Franzoi
2267 County Road HH
Junction City, WI 54443

WDNR
Attn: Ms. Lisa Gutknecht
5310 Rib Mountain Drive
Wausau, WI 54401

Tetra Tech
5404 Alderson Street, Suite 100, Schofield, WI 54476
Tel 715.355.4180 Fax 715.359.2853 www.tetratech.com

TETRA TECH

Interim Action Report

Ditch Assessment
FHR – Junction City Fuel Terminal
Junction City, Wisconsin

Prepared for:

Flint Hills Resources Pine Bend, LLC

Attn: Mr. John Bale
P.O. Box 64596
St. Paul, MN 55164-0596
651.480.3966

Prepared by:

Tetra Tech

5404 Alderson Street, Suite 100
Schofield, WI 54476
715.355.4180
Fax 715.359.2853

Tetra Tech Project No. 114-340632

June 14, 2012

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1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech), completed the assessment on a portion of the drainage ditch located on the western property boundary which comprises the east side of State Highway "34" at Flint Hills Resources Pine Bend, LLC's (FHR's) fuel terminal located in Junction City, Wisconsin (Figure 1). This report details the initial investigation, interim actions and follow-up verification surface water sampling in the ditch. This work was performed as part of overall maintenance of the facility in conjunction with the Wisconsin Department of Transportation (WDOT) and was completed in compliance with Wisconsin Department of Natural Resources (WDNR) guidelines and requirements.

2.0 BACKGROUND

On April 25, 2008, the Junction City Terminal Manager received notification from a WDOT Environmental Coordinator that a project manager had been walking the site as part of the STH "10" reconstruction, and had noticed "rust colored standing water" accompanied by "dead vegetation" in the drainage ditch immediately west of the FHR facility (Figure 2), requesting immediate notification to the WDNR. After additional correspondence between FHR personnel and WDOT representatives, later that day Tetra Tech was directed to collect a surface water sample in the area identified as potentially affected in the early afternoon of April, 25, 2008. Upon receipt of analytical results on April 28, 2008 indicating impact by volatile organics, verification sampling was performed, collecting an additional surface water sample in the original location with an additional downstream sample obtained where the drainage exits FHR property. The WDNR was contacted on April 28, 2008 by FHR to report the incident as a possible spill, providing results from the April 25, 2008 sampling event. Results of the second sampling event were received on April 29th which again indicated volatile organics were present in surface water in the same location as the original sample, however downstream sampling results indicated surface water in this area remained unaffected. Results again were forwarded to the WDNR which prompted discussion with FHR as to potential source(s) of the identified impact, including prospective options for mitigation including the potential of placing rip-rap ballast rock in the ditch to facilitate aeration.

However, during the course of the on-going investigation, reconstruction of the STH "10" and "34" interchange was progressing, ultimately including the ditch area adjoining the FHR facility which was subject to re-grading, matting and reseeding with the work completed in August 2008. Anticipated mowing/maintenance operations in the newly re-vegetated ditch to be performed by the WDOT negated the option of the suggested stone rip-rap. Consequently the WDNR recommended two additional sampling events be performed, and based on these results potentially a "No Further Action" request could be submitted for regulatory review and project closure.

On October 8, 2008 the ditch sampling was again performed in the two prescribed locations. Results indicated volatile organics were not detected in either sample above respective Method Detection Levels (MDLs). A subsequent sampling event was performed on November 11, 2008 complying with regulatory recommendations in obtaining sequential samples to substantiate case closure objectives. However, results of the November sampling event again indicated the presence of volatile organics.

Consequently, additional sampling was recommended for the following month but with the onset of winter, had to be delayed, with WDNR concurrence, until spring thaw with sample collection

completed on April 17, 2009. Results from the spring 2009 sampling event indicated volatile organics were not detected above the MDL in the original or downstream ditch sample. Table 1 includes all surface water results.

During the spring/early summer of 2009, FHR and Tetra Tech in conjunction with WDNR personnel formulated a plan for remedial action that included raising the elevation and re-grading the ditch area with compacted clay soil. This remedial action was proposed as the surface water impacts are believed to be the result of seepage of impacted groundwater from a historical closed release site that began to occur due to a high water table which was further enabled by the WDOT re-grading that lowered the ditch elevation. During the final planning and approval stages of the proposed action, the WDNR reclassified the project necessitating it be closed in accordance with s. NR 726, requiring more extensive remedial investigation/site assessment prior to the implementation of remedial action and/or case closure request submittal.

As a result, Tetra Tech prepared a site investigation plan and upon regulatory concurrence and approval, performed an environmental site assessment on October 13, 2009. The investigation included obtaining an additional surface water sample and advancing Geoprobes in the ditch and highway shoulder/right-of-way areas to collect soil and groundwater samples for analysis. The results of these findings, including site figures, soil boring logs, tabularized historical sampling data, and chemical analysis of soil and water sampling reports were provided in Tetra Tech's Ditch Assessment Report dated April 14, 2010. Based upon results of the October 13, 2009 investigation, Tetra Tech on behalf of FHR, recommended in their April 14, 2010 report, to raise the elevation of the ditch approximately three feet using compacted clay soil to prevent groundwater from entering the ditch as an interim action in anticipation it will be the final response action.

3.0 INTERIM ACTION ACTIVITIES

To implement the interim action to prevent groundwater from entering the ditch, the following activities and tasks were conducted in accordance with the WDNR approved remedial actions.

Tetra Tech selected SGS Environmental Contractor, LLC (SGS) of Merrill, Wisconsin to provide materials and equipment to conduct the field work for this project. Tetra Tech worked with SGS to prepare a traffic control plan and obtain all required WDOT permits.

On September 12, 2011, Tetra Tech and SGS mobilized to the site to implement interim action requirements. After completing FHR's EH&S Safe Work Permit Requirements, signs, barrels and cones were set up around the work zone perimeter to fulfill WDOT permit requirements.

The first phase of the project required stripping all topsoil from the work area and disking the native soil to create a bond between the native soil and clay material used to raise the elevation of the ditch. During the stripping phase of the project, the seeps became very apparent with the vegetation removed. The seep areas were marked by placing ribbon along the fence so these areas could be carefully observed during the placement of clay fill and after the interim action was completed.

After the grass and topsoil were removed, clay fill was placed in eight inch lifts and compacted starting at the truck exit and progressing south approximately 200 feet. Fill was placed to a depth of three feet. During the placement and compaction of the clay, the areas of the previous

seeps were continually monitored to make sure clay in these areas was not showing signs of becoming saturated while increasing the elevation of the ditch.

After the three feet of clay was installed and it was verified the seeps were stopped, six inches of topsoil was placed over the clay fill. The topsoil was then matted, seeded and mulched for erosion control. Hay bales were also placed at the south side of the project for additional erosion control measures. Photographs of interim action activities are included in Appendix A.

4.0 VERIFICATON MONITORING

After completing the interim action activities the week of September 12, 2011, weekly site visits were made for the next four weeks to verify the seeps had not returned and erosion control measures were working. Site visits verified the ditch was dry with no indication of seeps along the eastern bank or bottom of the ditch.

On September 19, 29 and October 26, 2011 surface water samples were collected at the north and south locations (Figure 2) after previous rain events and analyzed for PVOCs. All results for both the north and south sampling locations were below the level of detection (Table 1). The analytical reports are included in Appendix B.

5.0 CONCLUSIONS

Based on observations made during and after interim action activities along with verification sampling of surface water, it is apparent the interim action was successful at preventing impacted groundwater from entering the ditch and mixing with surface water.

6.0 RECOMMENDATIONS

Tetra Tech, on behalf of FHR, recommends that the interim actions taken at this site be considered the final response action and the site be considered for closure.

7.0 REMARKS

Information contained in this report represents our professional opinions. These opinions were arrived at in accordance with currently accepted hydrogeological and engineering practices at this time and location. Other than this, no warranty is implied or intended.

TETRA TECH

This report was prepared by:

Gregory M. Aldrian, P.G.
Program Manager

6/19/12
Dated

"I, Gregory M. Aldrian, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

CAW/MAM/GMA:caw/mam:prz
S:\ENV\KOCH_FHR\JUNCTION CITY\Ditch Project\2009\JCT Ditch Env Assesmnt Rept-Final-04-13-10.doc

TETRA TECH

TABLE 1
CHEMICAL ANALYSIS OF SURFACE WATER
HWY 34 DITCH WATER
FLINT HILLS RESOURCES PINE BEND, LLC
JUNCTION CITY, WISCONSIN
Tetra Tech #114-340632

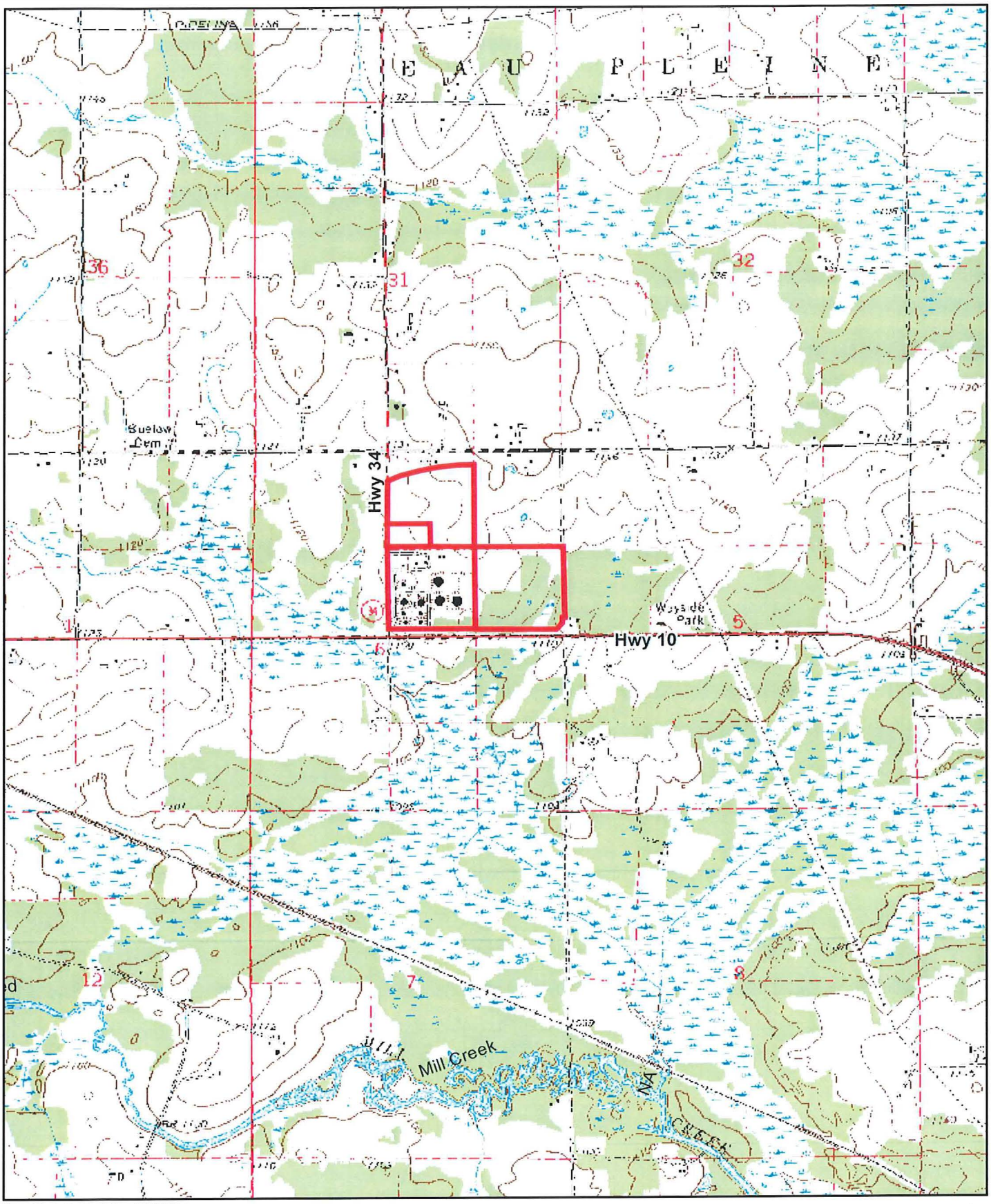
Sample Identification	North Location (50-ft southeast of MW-5 and 25-ft north of the pipeline)								NR 140	NR 140
Date Sampled	**4/25/2008**	**4/28/2008**	**10/8/2008**	**11/12/2008**	**4/16/2009**	**9/19/2011**	**9/29/2011**	**10/26/2011**	**PAL**	**ES**
Benzene	**66.4**	**18**	<0.23	**89.3**	<0.23	**<7.8**	<0.39	<0.39	0.5	5
Ethylbenzene	11.8	ND	<0.40	14	<0.40	<8.3	<0.41	<0.41	140	700
Methyl-tert-butyl ether	3.52	ND	<0.36	2.2	<0.36	<7.6	<0.38	<0.38	12	60
Toluene	2.65	ND	<0.36	1.9	<0.36	<8.3	<0.42	<0.42	200	1000
Trimethylbenzene	11.24	ND	<0.79	5.08	<0.79	<16.5	<0.83	<0.83	96	480
Xylene	15.92	ND	<1.10	10.55	<1.10	<25.0	<1.25	<1.25	1000	10000
			Pre-Interim Action			Post-Interim Action				

Sample Identification	South Location (corner of Hwy 34 and Hwy 10)								NR 140	NR 140
Date Sampled	**4/25/2008**	**4/28/2008**	**10/8/2008**	**11/12/2008**	**4/16/2009**	**9/19/2011**	**9/29/2011**	**10/26/2011**	**PAL**	**ES**
Benzene	---	<0.31	<0.23	<0.23	<0.23	<0.39	<0.39	<0.39	0.5	5
Ethylbenzene	---	2.96	<0.40	<0.40	<0.40	<0.41	<0.41	<0.41	140	700
Methyl-tert-butyl ether	---	4.33	<0.36	<0.36	<0.36	<0.38	<0.38	<0.38	12	60
Toluene	---	1.03	<0.36	<0.36	<0.36	<0.42	<0.42	<0.42	200	1000
Trimethylbenzene	---	2.664	<0.79	<0.79	<0.79	<0.83	<0.83	<0.83	96	480
Xylene	---	5.6	<1.10	<1.10	<1.10	<1.25	<1.25	<1.25	1000	10000
			Pre-Interim Action			Post-Interim Action				

All concentrations in ppl (ug/L)
--- = Location not sampled
PAL = WDNR Preventative Action Limit
ES = WDNR Enforcement Standard
ND = Not Detected
< = Parameter was not detected and if present is less than the limit of detection reported

0.58 = concentration > NR 140 PAL

66.4 = concentration > NR 140 ES



S:/gis/koch_gis/junction_city/pdf/site location

Tetra Tech Project No. 340370

June 2010

SCALE IN FEET

0 2,000

N

Figure 1

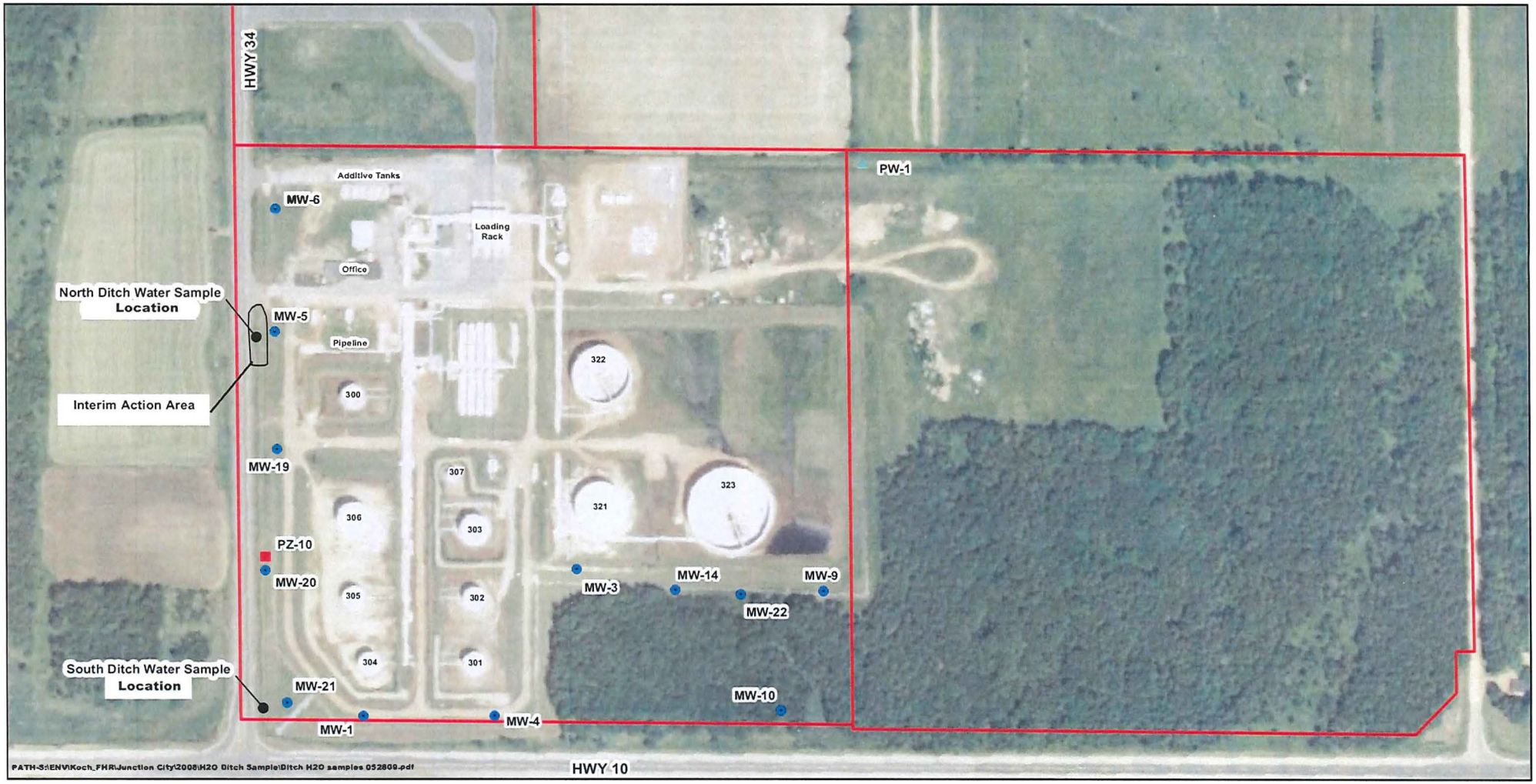
Site Location Map

Junction City Bulk Fuel Terminal

Flint Hills Resources Pine Bend, LLC

2267 State Highway 34

Junction City, WI 54443



2009

Legend

- Abandoned Well
- Active Monitoring Well
- Active Piezometer
- Potable Well
- Property Boundary
- Ditch Regrade Area

Feet
0 110 220

N W E S

Figure 2
Site Layout Map
Junction City Fuel Terminal
Flint Hills Resources Pine Bend, LLC
Portage County, Wisconsin

Appendix A

Project Photo Log

Interim Action Report
Ditch Assessment
Junction City, Wisconsin

Photograph 1. Looking south at area of the proposed interim action.

Photograph 2. Looking southeast at groundwater seeps along the eastern bank of the ditch.

Photograph 3. Looking south, removing topsoil and placement of first lift of clay.

Photograph 4. Looking south, compacting clay in lifts.

Photograph 5. Looking east at area with previous seeps.

Photograph 6. Looking northeast, final compaction of clay in area of former seeps.

Photograph 7. Looking south, spreading topsoil over compacted clay.

Photograph 8. Looking south, matting and seeding topsoil.

Photograph 9. Looking southeast at completed interim action.

Photograph 10. Looking south, final erosion control measures in place.

Appendix B

Surface Water Analytical Report

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

October 31, 2011

Marsha Meurette
Tetra Tech, INC.
5404 Alderson St
Suite 1
Schofield, WI 54476

RE: Project: 114-340632-200 J.C DITCH WATER
Pace Project No.: 4052827

Dear Marsha Meurette:
Enclosed are the analytical results for sample(s) received by the laboratory on October 27, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 114-340632-200 J.C DITCH WATER
Pace Project No.: 4052827

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 114-340632-200 J.C DITCH WATER
Pace Project No.: 4052827

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4052827001	**DITCH WATER NORTH**	Water	10/26/11 13:05	10/27/11 10:05
4052827002	**DITCH WATER SOUTH**	Water	10/26/11 13:15	10/27/11 10:05
4052827003	**TRIP BLANK**	Water	10/26/11 09:00	10/27/11 10:05

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 114-340632-200 J.C DITCH WATER
Pace Project No.: 4052827

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4052827001	**DITCH WATER NORTH**	WI MOD GRO	SES	9
4052827002	**DITCH WATER SOUTH**	WI MOD GRO	SES	9
4052827003	**TRIP BLANK**	WI MOD GRO	SES	9

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 114-340632-200 J.C DITCH WATER
Pace Project No.: 4052827

Sample: DITCH WATER NORTH **Lab ID: 4052827001** Collected: 10/26/11 13:05 Received: 10/27/11 10:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.39**	ug/L	1.0	0.39	1		10/28/11 16:49	71-43-2	
Ethylbenzene	**<0.41**	ug/L	1.0	0.41	1		10/28/11 16:49	100-41-4	
Methyl-tert-butyl ether	**<0.38**	ug/L	1.0	0.38	1		10/28/11 16:49	1634-04-4	
Toluene	**<0.42**	ug/L	1.0	0.42	1		10/28/11 16:49	108-88-3	
1,2,4-Trimethylbenzene	**<0.43**	ug/L	1.0	0.43	1		10/28/11 16:49	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/28/11 16:49	108-67-8	
m&p-Xylene	**<0.87**	ug/L	2.0	0.87	1		10/28/11 16:49	179601-23-1	
o-Xylene	**<0.38**	ug/L	1.0	0.38	1		10/28/11 16:49	95-47-6	
a,a,a-Trifluorotoluene (S)	101	%.	80-120		1		10/28/11 16:49	98-08-8	

Sample: DITCH WATER SOUTH **Lab ID: 4052827002** Collected: 10/26/11 13:15 Received: 10/27/11 10:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.39**	ug/L	1.0	0.39	1		10/28/11 17:14	71-43-2	
Ethylbenzene	**<0.41**	ug/L	1.0	0.41	1		10/28/11 17:14	100-41-4	
Methyl-tert-butyl ether	**<0.38**	ug/L	1.0	0.38	1		10/28/11 17:14	1634-04-4	
Toluene	**<0.42**	ug/L	1.0	0.42	1		10/28/11 17:14	108-88-3	
1,2,4-Trimethylbenzene	**<0.43**	ug/L	1.0	0.43	1		10/28/11 17:14	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/28/11 17:14	108-67-8	
m&p-Xylene	**<0.87**	ug/L	2.0	0.87	1		10/28/11 17:14	179601-23-1	
o-Xylene	**<0.38**	ug/L	1.0	0.38	1		10/28/11 17:14	95-47-6	
a,a,a-Trifluorotoluene (S)	102	%.	80-120		1		10/28/11 17:14	98-08-8	

Sample: TRIP BLANK **Lab ID: 4052827003** Collected: 10/26/11 09:00 Received: 10/27/11 10:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.39**	ug/L	1.0	0.39	1		10/28/11 17:38	71-43-2	
Ethylbenzene	**<0.41**	ug/L	1.0	0.41	1		10/28/11 17:38	100-41-4	
Methyl-tert-butyl ether	**<0.38**	ug/L	1.0	0.38	1		10/28/11 17:38	1634-04-4	
Toluene	**<0.42**	ug/L	1.0	0.42	1		10/28/11 17:38	108-88-3	
1,2,4-Trimethylbenzene	**<0.43**	ug/L	1.0	0.43	1		10/28/11 17:38	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/28/11 17:38	108-67-8	
m&p-Xylene	**<0.87**	ug/L	2.0	0.87	1		10/28/11 17:38	179601-23-1	
o-Xylene	**<0.38**	ug/L	1.0	0.38	1		10/28/11 17:38	95-47-6	
a,a,a-Trifluorotoluene (S)	101	%.	80-120		1		10/28/11 17:38	98-08-8	

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 114-340632-200 J.C DITCH WATER
Pace Project No.: 4052827

QC Batch: GCV/7510 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4052827001, 4052827002, 4052827003

METHOD BLANK: 525885 Matrix: Water
Associated Lab Samples: 4052827001, 4052827002, 4052827003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.43	1.0	10/28/11 09:00	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	10/28/11 09:00	
Benzene	ug/L	<0.39	1.0	10/28/11 09:00	
Ethylbenzene	ug/L	<0.41	1.0	10/28/11 09:00	
m&p-Xylene	ug/L	<0.87	2.0	10/28/11 09:00	
Methyl-tert-butyl ether	ug/L	<0.38	1.0	10/28/11 09:00	
o-Xylene	ug/L	<0.38	1.0	10/28/11 09:00	
Toluene	ug/L	<0.42	1.0	10/28/11 09:00	
a,a,a-Trifluorotoluene (S)	%.	102	80-120	10/28/11 09:00	

LABORATORY CONTROL SAMPLE & LCSD: 525886 525887

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.6	20.7	108	104	80-120	4	20	
1,3,5-Trimethylbenzene	ug/L	20	21.3	20.3	107	101	80-120	5	20	
Benzene	ug/L	20	22.5	21.6	113	108	80-120	4	20	
Ethylbenzene	ug/L	20	21.4	20.4	107	102	80-120	5	20	
m&p-Xylene	ug/L	40	43.0	40.8	107	102	80-120	5	20	
Methyl-tert-butyl ether	ug/L	20	21.3	20.8	106	104	80-120	2	20	
o-Xylene	ug/L	20	21.6	20.6	108	103	80-120	5	20	
Toluene	ug/L	20	21.7	20.8	108	104	80-120	4	20	
a,a,a-Trifluorotoluene (S)	%.				103	102	80-120			

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 114-340632-200 J.C DITCH WATER
Pace Project No.: 4052827

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: GCV/7510

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-340632-200 J.C DITCH WATER
Pace Project No.: 4052827

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4052827001	**DITCH WATER NORTH**	WI MOD GRO	GCV/7510		
4052827002	**DITCH WATER SOUTH**	WI MOD GRO	GCV/7510		
4052827003	**TRIP BLANK**	WI MOD GRO	GCV/7510		

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

JBF

4052827

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	TETRA TECH
Branch/Location:	SCHOFIELD WI
Project Contact:	GREG ALDRIAN
Phone:	715-551-9121
Project Number:	114-340632-200
Project Name:	J.C. DITCH WATER
Project State:	WI
Sampled By (Print):	GREG ALDRIAN
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	GREG ALDRIAN
Mail To Company:	TT
Mail To Address:	5404 ALDERSON ST SCHOFIELD WI 54476
Invoice To Contact:	
Invoice To Company:	GAME
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PVOC	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	DITCH WATER NORTH	10/26	1:05	SW	N	B		3 VOA	3-40ml B	
002	DITCH WATER SOUTH	10/26	1:15	SW	N	B		3 VOA	↓	
003	TRIP BLANK	10/26	9:00	W	N	B		1 VOA	1-40ml B	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/26/11 4:45	DURHAMS	10/26/11 4:45
DURHAMS	10/27/11 10:05		10/27/11 10:05

PACE Project No. 4052827

Receipt Temp = 2.0 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

019a(27Jun2006)

ORIGINAL

Pace Analytical Services, Inc.
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Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: Tetra tech Project # 4052827

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used NA **Type of Ice:** Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature 30.1 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Optional
Proj. Due Date:
Proj. Name:

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

Person examining contents:
Date: 10/27/11
Initials: DK

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☑No ☐N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☑Yes ☐No ☐N/A	12.
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing prese vation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 10-27-11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

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September 23, 2011

Marsha Meurette
Tetra Tech, INC.
5404 Alderson St
Suite 1
Schofield, WI 54476

RE: Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051088

Dear Marsha Meurette:
Enclosed are the analytical results for sample(s) received by the laboratory on September 20, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051088

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

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SAMPLE SUMMARY

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051088

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4051088001	DITCH WATER NORTH	Water	09/19/11 10:42	09/20/11 16:10
4051088002	DITCH WATER SOUTH	Water	09/19/11 10:50	09/20/11 16:10
4051088003	TRIP BLANK	Water	09/19/11 10:00	09/20/11 16:10

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SAMPLE ANALYTE COUNT

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051088

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4051088001	**DITCH WATER NORTH**	WI MOD GRO	SES	9
4051088002	**DITCH WATER SOUTH**	WI MOD GRO	SES	9
4051088003	**TRIP BLANK**	WI MOD GRO	SES	9

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ANALYTICAL RESULTS

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051088

Sample: DITCH WATER NORTH **Lab ID: 4051088001** Collected: 09/19/11 10:42 Received: 09/20/11 16:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<7.8**	ug/L	20.0	7.8	20		09/22/11 14:34	71-43-2	
Ethylbenzene	**<8.3**	ug/L	20.0	8.3	20		09/22/11 14:34	100-41-4	
Methyl-tert-butyl ether	**<7.6**	ug/L	20.0	7.6	20		09/22/11 14:34	1634-04-4	
Toluene	**<8.3**	ug/L	20.0	8.3	20		09/22/11 14:34	108-88-3	
1,2,4-Trimethylbenzene	**<8.6**	ug/L	20.0	8.6	20		09/22/11 14:34	95-63-6	
1,3,5-Trimethylbenzene	**<7.9**	ug/L	20.0	7.9	20		09/22/11 14:34	108-67-8	
m&p-Xylene	**<17.4**	ug/L	40.0	17.4	20		09/22/11 14:34	179601-23-1	
o-Xylene	**<7.6**	ug/L	20.0	7.6	20		09/22/11 14:34	95-47-6	
a,a,a-Trifluorotoluene (S)	103	%.	80-120		20		09/22/11 14:34	98-08-8	F1

Sample: DITCH WATER SOUTH **Lab ID: 4051088002** Collected: 09/19/11 10:50 Received: 09/20/11 16:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.39**	ug/L	1.0	0.39	1		09/22/11 14:09	71-43-2	
Ethylbenzene	**<0.41**	ug/L	1.0	0.41	1		09/22/11 14:09	100-41-4	
Methyl-tert-butyl ether	**<0.38**	ug/L	1.0	0.38	1		09/22/11 14:09	1634-04-4	
Toluene	**<0.42**	ug/L	1.0	0.42	1		09/22/11 14:09	108-88-3	
1,2,4-Trimethylbenzene	**<0.43**	ug/L	1.0	0.43	1		09/22/11 14:09	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		09/22/11 14:09	108-67-8	
m&p-Xylene	**<0.87**	ug/L	2.0	0.87	1		09/22/11 14:09	179601-23-1	
o-Xylene	**<0.38**	ug/L	1.0	0.38	1		09/22/11 14:09	95-47-6	
a,a,a-Trifluorotoluene (S)	103	%.	80-120		1		09/22/11 14:09	98-08-8	

Sample: TRIP BLANK **Lab ID: 4051088003** Collected: 09/19/11 10:00 Received: 09/20/11 16:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.39**	ug/L	1.0	0.39	1		09/22/11 13:44	71-43-2	
Ethylbenzene	**<0.41**	ug/L	1.0	0.41	1		09/22/11 13:44	100-41-4	
Methyl-tert-butyl ether	**<0.38**	ug/L	1.0	0.38	1		09/22/11 13:44	1634-04-4	
Toluene	**<0.42**	ug/L	1.0	0.42	1		09/22/11 13:44	108-88-3	
1,2,4-Trimethylbenzene	**<0.43**	ug/L	1.0	0.43	1		09/22/11 13:44	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		09/22/11 13:44	108-67-8	
m&p-Xylene	**<0.87**	ug/L	2.0	0.87	1		09/22/11 13:44	179601-23-1	
o-Xylene	**<0.38**	ug/L	1.0	0.38	1		09/22/11 13:44	95-47-6	
a,a,a-Trifluorotoluene (S)	103	%.	80-120		1		09/22/11 13:44	98-08-8	

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QUALITY CONTROL DATA

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051088

QC Batch: GCV/7234 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4051088001, 4051088002, 4051088003

METHOD BLANK: 505819 Matrix: Water
Associated Lab Samples: 4051088001, 4051088002, 4051088003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.43	1.0	09/22/11 08:43	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	09/22/11 08:43	
Benzene	ug/L	<0.39	1.0	09/22/11 08:43	
Ethylbenzene	ug/L	<0.41	1.0	09/22/11 08:43	
m&p-Xylene	ug/L	<0.87	2.0	09/22/11 08:43	
Methyl-tert-butyl ether	ug/L	<0.38	1.0	09/22/11 08:43	
o-Xylene	ug/L	<0.38	1.0	09/22/11 08:43	
Toluene	ug/L	<0.42	1.0	09/22/11 08:43	
a,a,a-Trifluorotoluene (S)	%.	103	80-120	09/22/11 08:43	

LABORATORY CONTROL SAMPLE & LCSD: 505820 505821

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.2	21.8	106	109	80-120	3	20	
1,3,5-Trimethylbenzene	ug/L	20	21.0	21.4	105	107	80-120	2	20	
Benzene	ug/L	20	21.7	22.4	109	112	80-120	3	20	
Ethylbenzene	ug/L	20	21.1	21.5	105	107	80-120	2	20	
m&p-Xylene	ug/L	40	41.9	42.4	105	106	80-120	1	20	
Methyl-tert-butyl ether	ug/L	20	20.6	22.0	103	110	80-120	6	20	
o-Xylene	ug/L	20	21.0	21.3	105	107	80-120	1	20	
Toluene	ug/L	20	21.2	21.7	106	109	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%.				103	103	80-120			

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Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051088

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: GCV/7234

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

F1 The sample was analyzed at a dilution due to foaming of the sample in the purge vessel.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051088

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4051088001	**DITCH WATER NORTH**	WI MOD GRO	GCV/7234		
4051088002	**DITCH WATER SOUTH**	WI MOD GRO	GCV/7234		
4051088003	**TRIP BLANK**	WI MOD GRO	GCV/7234		

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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

CHAIN OF CUSTODY

4051088

(Please Print Clearly)	
Company Name:	TETRA TECH
Branch/Location:	SCHOFIELD WI
Project Contact:	GREG ALDRIAN
Phone:	715-551-9121
Project Number:	114-340632-200
Project Name:	J.C DITCH WATER
Project State:	WI
Sampled By (Print):	GREG ALDRIAN
Sampled By (Sign):	
PO #:	Regulatory Program:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	GREG ALDRIAN
Mail To Company:	TETRA TECH
Mail To Address:	5404 ALDERSON ST SCHOFIELD WI 54476
Invoice To Contact:	GREG ALDRIAN
Invoice To Company:	TETRA TECH
Invoice To Address:	SAME
Invoice To Phone:	715-355-4180

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analysis Requested	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N	Pick Letter	PVOC			
001	DITCH WATER NORTH	9/19	10:45	SW	N	B	/	3-40mL O		
002	DITCH WATER SOUTH	9/19	10:55	GW	N	B	/	↓		
003	TRIP BLANK	9/19	10:00	W	N	B	/	2-40mL O		

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	9/20 4:10		9-21-15 10:10

PACE Project No.
4051088

Receipt Temp = 20.1 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

PaceAnalytical

Sample Condition Upon Receipt

Client Name: Tetra Tech Project # 4051088

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used NA Type of Ice: (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Rol Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☐ no

Optional: Proj. Due Date: Proj. Name:

Person examining contents:
Date: 9-20-11
Initials: [illegible]

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☐No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] **Date:** 9-20-11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hc incorrect preservative, out of temp, incorrect containers)

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

October 04, 2011

Marsha Meurette
Tetra Tech, INC.
5404 Alderson St
Suite 1
Schofield, WI 54476

RE: Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051581

Dear Marsha Meurette:
Enclosed are the analytical results for sample(s) received by the laboratory on September 30, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051581

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

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SAMPLE SUMMARY

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051581

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4051581001	DITCH WATER NORTH	Water	09/29/11 11:10	09/30/11 11:00
4051581002	DITCH WATER SOUTH	Water	09/29/11 11:15	09/30/11 11:00
4051581003	TRIP BLANK	Water	09/29/11 10:00	09/30/11 11:00

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SAMPLE ANALYTE COUNT

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051581

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4051581001	**DITCH WATER NORTH**	WI MOD GRO	SES	9
4051581002	**DITCH WATER SOUTH**	WI MOD GRO	SES	9
4051581003	**TRIP BLANK**	WI MOD GRO	SES	9

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ANALYTICAL RESULTS

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051581

Sample: DITCH WATER NORTH **Lab ID: 4051581001** Collected: 09/29/11 11:10 Received: 09/30/11 11:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.39**	ug/L	1.0	0.39	1		10/03/11 16:53	71-43-2	
Ethylbenzene	**<0.41**	ug/L	1.0	0.41	1		10/03/11 16:53	100-41-4	
Methyl-tert-butyl ether	**<0.38**	ug/L	1.0	0.38	1		10/03/11 16:53	1634-04-4	
Toluene	**<0.42**	ug/L	1.0	0.42	1		10/03/11 16:53	108-88-3	
1,2,4-Trimethylbenzene	**<0.43**	ug/L	1.0	0.43	1		10/03/11 16:53	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/03/11 16:53	108-67-8	
m&p-Xylene	**<0.87**	ug/L	2.0	0.87	1		10/03/11 16:53	179601-23-1	
o-Xylene	**<0.38**	ug/L	1.0	0.38	1		10/03/11 16:53	95-47-6	
a,a,a-Trifluorotoluene (S)	103	%.	80-120		1		10/03/11 16:53	98-08-8	

Sample: DITCH WATER SOUTH **Lab ID: 4051581002** Collected: 09/29/11 11:15 Received: 09/30/11 11:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.39**	ug/L	1.0	0.39	1		10/03/11 17:18	71-43-2	
Ethylbenzene	**<0.41**	ug/L	1.0	0.41	1		10/03/11 17:18	100-41-4	
Methyl-tert-butyl ether	**<0.38**	ug/L	1.0	0.38	1		10/03/11 17:18	1634-04-4	
Toluene	**<0.42**	ug/L	1.0	0.42	1		10/03/11 17:18	108-88-3	
1,2,4-Trimethylbenzene	**<0.43**	ug/L	1.0	0.43	1		10/03/11 17:18	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/03/11 17:18	108-67-8	
m&p-Xylene	**<0.87**	ug/L	2.0	0.87	1		10/03/11 17:18	179601-23-1	
o-Xylene	**<0.38**	ug/L	1.0	0.38	1		10/03/11 17:18	95-47-6	
a,a,a-Trifluorotoluene (S)	103	%.	80-120		1		10/03/11 17:18	98-08-8	

Sample: TRIP BLANK **Lab ID: 4051581003** Collected: 09/29/11 10:00 Received: 09/30/11 11:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.39**	ug/L	1.0	0.39	1		10/03/11 17:43	71-43-2	
Ethylbenzene	**<0.41**	ug/L	1.0	0.41	1		10/03/11 17:43	100-41-4	
Methyl-tert-butyl ether	**<0.38**	ug/L	1.0	0.38	1		10/03/11 17:43	1634-04-4	
Toluene	**<0.42**	ug/L	1.0	0.42	1		10/03/11 17:43	108-88-3	
1,2,4-Trimethylbenzene	**<0.43**	ug/L	1.0	0.43	1		10/03/11 17:43	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/03/11 17:43	108-67-8	
m&p-Xylene	**<0.87**	ug/L	2.0	0.87	1		10/03/11 17:43	179601-23-1	
o-Xylene	**<0.38**	ug/L	1.0	0.38	1		10/03/11 17:43	95-47-6	
a,a,a-Trifluorotoluene (S)	103	%.	80-120		1		10/03/11 17:43	98-08-8	

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QUALITY CONTROL DATA

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051581

QC Batch: GCV/7330 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4051581001, 4051581002, 4051581003

METHOD BLANK: 511524 Matrix: Water
Associated Lab Samples: 4051581001, 4051581002, 4051581003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.43	1.0	10/03/11 12:54	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	10/03/11 12:54	
Benzene	ug/L	<0.39	1.0	10/03/11 12:54	
Ethylbenzene	ug/L	<0.41	1.0	10/03/11 12:54	
m&p-Xylene	ug/L	<0.87	2.0	10/03/11 12:54	
Methyl-tert-butyl ether	ug/L	<0.38	1.0	10/03/11 12:54	
o-Xylene	ug/L	<0.38	1.0	10/03/11 12:54	
Toluene	ug/L	<0.42	1.0	10/03/11 12:54	
a,a,a-Trifluorotoluene (S)	%.	103	80-120	10/03/11 12:54	

LABORATORY CONTROL SAMPLE & LCSD: 511525 511526

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.8	21.8	109	109	80-120	.07	20	
1,3,5-Trimethylbenzene	ug/L	20	21.5	21.7	108	108	80-120	.7	20	
Benzene	ug/L	20	22.2	23.0	111	115	80-120	4	20	
Ethylbenzene	ug/L	20	21.7	22.1	109	110	80-120	2	20	
m&p-Xylene	ug/L	40	43.1	43.6	108	109	80-120	1	20	
Methyl-tert-butyl ether	ug/L	20	21.8	22.4	109	112	80-120	3	20	
o-Xylene	ug/L	20	21.7	21.9	108	109	80-120	1	20	
Toluene	ug/L	20	21.7	22.2	109	111	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%.				102	102	80-120			

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QUALIFIERS

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051581

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: GCV/7330

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-340632-200 J.C.DITCH WATER
Pace Project No.: 4051581

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4051581001	**DITCH WATER NORTH**	WI MOD GRO	GCV/7330		
4051581002	**DITCH WATER SOUTH**	WI MOD GRO	GCV/7330		
4051581003	**TRIP BLANK**	WI MOD GRO	GCV/7330		

Pace Analytical Services, Inc.
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Pace Analytical

Sample Condition Upon Receipt

Client Name: Tetra Tech Project # 405581

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used MA Type of Ice: (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature 4.0C Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Optional
Proj. Due Date:
Proj. Name:

Person examining contents:
Date: LB 4/30/11
Initials: _____

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 5-30-11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hot, incorrect preservative, out of temp, incorrect containers)

(Please Print Clearly)

Company Name:	TETRA TECH
Branch/Location:	SCHOFIELD WI
Project Contact:	GREG ALDRIAN
Phone:	715-551-9121
Project Number:	114-340632-200
Project Name:	J.C. DITCH WATER
Project State:	WI
Sampled By (Print):	GREG ALDRIAN
Sampled By (Sign):	[signature]
PO #:	Regulatory Program:

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CHAIN OF CUSTODY

SK

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

405158

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED? (YES/NO) Y/N: N
PRESERVATION (CODE)* Pick Letter: B
Analyses Requested: PVOC

Quote #:	
Mail To Contact:	GREG ALDRIAN
Mail To Company:	TETRA TECH
Mail To Address:	5404 ALDERSON ST SCHOFIELD WI 54476
Invoice To Contact:	GREG ALDRIAN
Invoice To Company:	TETRA TECH
Invoice To Address:	SAME
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, Sl = Sludge
W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	PVOC	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	DITCH WATER NORTH	9/29	11:10	SW	✓	3 VOA		
002	DITCH WATER SOUTH	9/29	11:15	SW	✓	3 VOA		
003	TRIP BLANK	9/29	10:00	W	✓	2 VOA		

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	9/29 / 5:00	DUNHAMS	9/29 / 5:00
Dunhams	9/30/11 11:00	[signature]-Pace	9/30/11 11:00

PACE Project No. 405158

Receipt Temp = ICE °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

TETRA TECH

Report of

Ditch Assessment
FHR - Junction City Fuel Terminal
Junction City, Wisconsin

Prepared for:

Flint Hills Resources, LP
Attn: Mr. John Bale
P.O. Box 64596
St. Paul, MN 55164-0596
651..480.3966

Prepared by:

Tetra Tech
555 South 72nd Avenue
Wausau, WI 54401
715.845.4100
Fax 715.842.0381

Tetra Tech Project No. 114-340316

April 14, 2010

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TETRA TECH

April 14, 2010

Flint Hills Resources, LP
Attn: Mr. John Bale
P.O. Box 64596
St. Paul, MN 55164-0596

SUBJECT: Ditch Assessment Report
Flint Hills Resources, LP
Junction City, Wisconsin
WDNR BRRTS #02-50-553760
Tetra Tech Project # 114-340316

Dear Mr. Bale:

Tetra Tech, Inc. (Tetra Tech), completed the assessment on the west property border/ditch area at Flint Hills Resources, LP's (FHR's) fuel terminal located in Junction City, Wisconsin. The assessment initially included surface water sampling, however more recent subsurface soil and groundwater sample collection and analysis was completed as part of a expanded effort to identify the potential source for surface water impacts. This work was performed as part of overall maintenance of the facility, and was completed in compliance with WDNR guidelines and requirements.

In addition, on behalf of FHR, we are forwarding a copy of this report to Ms. Lisa Gutknecht, WDNR project manager for the Junction City Terminal. A $750.00 check to cover WDNR review fees is included with the WDNR copy of the report.

If you have any questions please feel free to contact me at (715) 845-4100.

Sincerely,
TETRA TECH

Gregory M. Aldrian, P.G.
Program Manager

MAM/GMA:mam:prz
S:\ENV\KOCH_FHR\JUNCTION CITY\Ditch Project\2009\JCT Ditch Env Assesmnt Rept-Draft 01-12-10.doc

cc: Flint Hills Resources, LP
Attn: Mr. Brad Stubbe
2267 STH 34 North
Junction City, WI 54443

WDNR
Attn: Ms. Lisa Gutknecht
5310 Rib Mountain Drive
Wausau, WI 54401

Tetra Tech
555 South 72nd Avenue, Wausau, WI 54401
Tel 715.845.4100 Fax 715.842.0381 www.tetratech.com

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1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech), completed the assessment on a portion of the drainage ditch located on the western property boundary which comprises the east side of State Highway "34" at Flint Hills Resources, LP's (FHR's) fuel terminal located in Junction City, Wisconsin (Figures 1 & 2). This report details the initial investigatory and follow-up verification surface water sampling in the ditch and includes results from soil and groundwater samples collected from Geoprobe borings in the affected area. Photo documentation of the work area is also provided for reference. This work was performed as part of overall maintenance of the facility in conjunction with the STH "10" reconstruction efforts under the direction of the Wisconsin Department of Transportation (DOT) and was completed in compliance with Wisconsin Department of Natural Resources (WDNR) guidelines and requirements.

2.0 BACKGROUND

On April 25, 2008, the Junction City Terminal Manager received notification from a DOT Environmental Coordinator that a project manager had been walking the site as part of the STH "10" reconstruction, and had noticed "rust colored standing water" accompanied by "dead vegetation" in the drainage ditch immediately west of the FHR facility (Fig 2), requesting immediate notification to the WDNR. After additional correspondence between FHR personnel and DOT representatives, later that day Tetra Tech was directed to collect a surface water sample in the area identified as potentially affected as noted, performing ditch water sample collection in the early afternoon of April, 25, 2008. Upon receipt of analytical results on April 28, 2008 indicating impact by volatile organics, verification sampling was performed, collecting an additional surface water sample in the original location with an additional downstream sample obtained where the drainage exits FHR property. The WDNR was contacted on April 28, 2008 by FHR to report the incident as a possible spill, providing results from the April 25, 2008 sampling event. Results of the second sampling event were received on April 29th which again indicated volatile organics were present in surface water in the same location as the original sample, however downstream sampling results indicated surface water in this area remained unaffected. Results again were forwarded to the WDNR which prompted discussion with FHR as to potential source(s) of the identified impact, including prospective options for mitigation including the potential of placing rip-rap ballast rock in the ditch to facilitate aeration.

However, during the course of the on-going investigation, reconstruction of the STH "10" and "34" interchange was progressing, ultimately including the ditch area adjoining the FHR facility which was subject to re-grading, matting and reseeding with the work completed in August 2008. Anticipated mowing/maintenance operations in the newly re-vegetated ditch to be performed by the WDOT negated the option of the suggested stone rip-rap. Consequently the WDNR recommended two additional sampling events be performed, and based on these results potentially a "No Further Action" request could be submitted for regulatory review and project closure.

On October 8, 2008 the ditch sampling was again performed in the two prescribed locations. Results indicated volatile organics were not detected in either sample above respective method detection levels. A subsequent sampling event was performed on November 11, 2008 complying with regulatory recommendations in obtaining sequential samples to substantiate case closure objectives. However, results of the November sampling event again indicated the presence of volatile organics.

Consequently, additional sampling was recommended for the following month but with the onset of winter, had to be delayed, with WDNR concurrence, until spring thaw with sample collection completed on April 17, 2009. Results from the spring 2009 sampling event indicated volatile organics were not detected above the Method Detection Limit (MDL) in the original or downstream ditch sample. Table 1 includes all surface water results. The surface water analytical report is located in Appendix A. Photographs of the sample locations in addition to field conditions (prior to ditch reconstruction/grading) during the initial April 25, 2008 sampling event are provided in Appendix B.

During the spring/early summer of 2009, FHR and Tetra Tech in conjunction with WDNR personnel formulated a plan for remedial action that included raising the elevation and re-grading the ditch area. During the final planning and approval stages of the proposed action, the WDNR reclassified the project necessitating it be closed in accordance with s. NR 726, requiring more extensive remedial investigation/site assessment prior to the implementation of remedial action and/or case closure request submittal.

As a result, Tetra Tech prepared a site investigation plan and upon regulatory concurrence and approval, performed an environmental site assessment on October 13, 2009. The investigation included obtaining an additional surface water sample and advancing Geoprobes in the ditch and highway shoulder/right-of-way areas to collect soil and groundwater samples for analysis. The results of these findings, including site figures, soil boring logs, tabularized historical sampling data, and chemical analysis of soil and water sampling reports are provided in the following sections.

3.0 GEOPROBE SUBSURFACE ASSESSMENT

On October 13, 2009 subsurface assessment was performed in the ditch area south of the FHR entrance drive where surface water impacts had been intermittently identified. The assessment included the installation of six soil geobrobe borings (GP-1 through GP-6) advanced to eight to nine feet below land surface (bls), collecting soil samples for screening with a photoionization detector (PID), and based on PID readings, submitting samples for chemical analysis of GRO and PVOC.

In addition, groundwater samples were collected from the respective geoprobe boreholes and submitted for analysis of GRO/PVOC. The general work area, including the boring locations, is depicted in Figure 3. Methods and procedures utilized to collect and analyze the soil and groundwater samples are provided in Appendix C. Soil boring logs including PID soil screening results are presented in Appendix D. Result of the chemical analysis are summarized on Tables 2 and 3 with analytical reports included in Appendix E. WDNR Soil Borehole Abandonment forms are provided in Appendix F.

In general, soils encountered in the six borings consisted of brown or grayish brown clayey sand or sandy clay. Rock fragments, gravel or weathered bedrock was encountered from 6 ft. to 9 ft. bls. Groundwater levels were measured in the borings ranging from 4 ft. to 8 ft. bls.; however, measured water depths were not indicative of static conditions and are not believed to represent current water table elevations.

PID field screening was performed on all six soil borings with readings obtained in approximate 2 foot sampling intervals and/or where soil layer changes were encountered as the boring progressed. Field screening results indicate Geoprobe borings GP-2 and GP-3 had PID readings greater than 10 units ranging from 10.1 units to 85 units in GP-2 and 163 units to 2561

units in GP-3. Consequently, samples were submitted for analytical verification (GRO/PVOC) from GP-2 and GP-3 in the soil interval exhibiting the highest PID reading.

Analytical results indicate that sample GP-2 (-6 ft.) had a GRO detection of 4.0 ppm, however all PVOC parameters were below their respective Limit of Quantitation. The sample analyzed from GP-3 (-3 ft.) had toluene detected at 151 parts per billion (ppb), with GRO and other PVOC analytes below their respective MDL. None of the detections in either boring exceed current NR 720 Generic Soil Clean-up Standards or, in the case of sample GP-3 (-3 ft.), the NR 746 Direct Contact Standard for impacted soil 4 feet or less bls.

Groundwater samples (GPW-1 through GPW-6) were obtained from the Geoprobe borings upon completion utilizing a peristaltic pump after allowing sufficient time for water to accumulate in the borehole. Samples were submitted for analysis of GRO/PVOC. In summation, groundwater analytical results indicate benzene (113 ppb to 1380 ppb) was detected in excess of NR 140 Groundwater Enforcement Standard (ES) in samples GPW-1 through GPW-4 with one or more additional PVOC parameter detected in excess of its respective NR 140 Preventative Action Limit (PAL) in monitoring wells GPW-1 and GPW-3. In addition, groundwater sample GPW-5 had benzene (1.1 ppb) and MTBE (16.3 ppb) in excess of their PAL; however sample GPW-6 did not have PVOC parameters detected above their respective laboratory limit of quantitation.

4.0 DISCUSSION AND CONCLUSIONS

Based on the data obtained as detailed in this report including surface water, groundwater, and soil sampling and analysis in conjunction with data obtained historically from the property, in consideration of it being subject to WDNR NR 726 conditional closure requirements (WDNR Case Closure Letter March 18, 2008) including GIS registry, Tetra Tech, on behalf of FHR concludes the following:

- The FHR Junction City facility received conditional site closure in March 2008 acknowledging groundwater impacts exceeding NR 140 ES were present on the FHR property, the adjoining DOT STH "34" right-of-way to the west, and on property acquired by WDOT to the west of STH "34". The geoprobe assessment was performed in an area delineated in prior investigation as having NR 140 ES exceedences and is included in the GIS registry.

- Soil identified in the geoprobes indicates soils encountered in the area of assessment consist primarily of sandy clay or clayey sand (SC), consistent with those encountered in the interior of the FHR facility. Impacted soil exceeding WDNR soil clean up standards was not encountered during this investigation. This would potentially indicate the surface water impacts are not a result of run-off or from a surface/shallow soil source commonly associated with a spill.

- The side/upgradient monitoring well MW-5 continues to exhibit NR 140 ES/PAL exceedences, including the most recent sampling events (May and December, 2009). Groundwater elevation data obtained from MW-5 indicates the static water level has historically been higher (1125.67 to 1121.45 feet above mean sea level (MSL)) than the surface elevation of the ditch located approximately 40 feet west of the well (1121.14 feet above MSL) and in the "North" surface water sampling location (1120.11). Historical assessment, including soil borings and hydrogeological evaluation has shown the predominantly clay soil at the site may act as an overlying confining layer, with groundwater or water-bearing soil typically encountered substantially below static water levels measured at monitoring wells. Consequently, if the confining layer is disturbed via excavation, grading etc, the replaced materials would likely be more permeable and allow migration of previously confined groundwater to the surface.

A graph depicting historical measured static watertable elevations in MW-5 is provided in Figure 4. The graph includes measured elevation data for land surface at the well, ditch directly west of MW-5, and in the approximate "North" surface water sample collection area. This graph would support artesian characteristics in the vicinity of the ditch and would indicate a potential for an intermittent discharge to surface water in the ditch.

- Surface water samples collected at the north end of the ditch had benzene concentrations ranging from 18 ppb to 89 ppb and most likely would be below any discharge standards established in NR105 for this type of surface water body.

- Surface water samples obtained in the downstream "South" sampling location have not had PVOC parameters detected in excess of their respective limit of detection. Consequently, the area of surface water affected is evidently localized with site conditions limiting or mitigating the migration of impacted water to the "South" sampling location near the end of the drainage prior to entering the culvert crossing STH "34".

5.0 RECOMMENDATIONS

Based upon results of this investigation Tetra Tech on behalf of FHR recommends raising the elevation of the ditch approximately three feet using compacted clay soil then regrading it to prevent it from having standing surface water during periods of prolonged precipitation. The regraded area will receive top soil, be seeded and mulched to prevent erosion. The area to be regraded will extend from visitor entrance south approximately 200 feet.

6.0 REMARKS

Information contained in this report represents our professional opinions. These opinions were arrived at in accordance with currently accepted hydrogeological and engineering practices at this time and location. Other than this, no warranty is implied or intended.

TETRA TECH

This report was prepared by:

Craig A. Wieman
Senior Environmental Scientist

4-19-10
Dated

"I, Craig A. Wieman, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

This report was reviewed by:

Gregory M. Aldrian, P.G.
Program Manager

4/19/10
Dated

"I, Gregory M. Aldrian, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

CAW/MAM/GMA:caw/mam:prz
S:\ENV\KOCH_FHR\JUNCTION CITY\Ditch Project\2009\JCT Ditch Env Assesmnt Rept-Final-04-13-10.doc

TETRA TECH, INC.

TABLE 1
SURFACE WATER CHEMISTRY- DITCH SAMPLES
FLINT HILLS RESOURCES, LP
JUNCTION CITY, WISCONSIN
TETRA TECH #114-340316.100

SAMPLE LOCATION	North Ditch						South Ditch				NR 140 PAL	NR 140 ES
DATE	4/25/08	4/28/08	10/8/08	11/12/08	4/17/09	10/13/09	4/28/08	10/8/08	11/12/08	4/17/09		
PARAMETER												
Diesel Range Organics	-	-	-	-	-	-	-	-	-	-	NS	NS
Gasoline Range Organics	-	-	-	-	-	-	-	-	-	-	NS	NS
VOLATILE ORGANIC COMPOUNDS												
Benzene	**66.4**	**18**	<0.23	**89.3**	<0.23	<0.23	<0.31	<0.23	<0.23	<0.23	*0.5*	**5**
Toluene	2.65	1.03	<0.36	1.9	<0.36	<0.36	<0.30	<0.36	<0.36	<0.36	*200*	**1,000**
Ethylbenzene	11.8	2.96	<0.40	14.0	<0.40	<0.40	<0.50	<0.40	<0.40	<0.40	*140*	**700**
Xylenes	15.92	5.6	<0.74	10.55	<0.74	<0.74	<0.62	<0.74	<0.74	<0.74	*1000*	**10,000**
Methyl-tert-butyl-ether	3.52	0.918	<0.36	2.2	<0.36	0.38*	<0.30	<0.36	<0.36	<0.36	*12*	**60**
Trimethylbenzenes[1]	11.24	2.66	<0.40	5.08	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	*96*	**480**
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-	-	*0.5*	**5**
POLYNUCLEAR AROMATIC HYDROCARBONS												
Naphthalene	-	-	-	-	-	-	-	-	-	-	*10*	**100**
Anthracene	-	-	-	-	-	-	-	-	-	-	*600*	**3,000**
Benzo(a)Pyrene	-	-	-	-	-	-	-	-	-	-	*0.02*	**0.2**
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	*0.02*	**0.2**
Chrysene	-	-	-	-	-	-	-	-	-	-	*0.02*	**0.2**
Fluoranthene	-	-	-	-	-	-	-	-	-	-	*80*	**400**
Fluorene	-	-	-	-	-	-	-	-	-	-	*80*	**400**
Pyrene	-	-	-	-	-	-	-	-	-	-	*50*	**250**
Total PAH List	-	-	-	-	-	-	-	-	-	-	NS	NS

All concentrations in ppb (ug/l)
PAL = WDNR Preventative Action Limit
ES = WDNR Enforcement Standard
[1] = Combined 1,2,4- & 1,3,5- trimethylbenzene compounds
- =Not sampled

NS = No applicable standard
< = Parameter was not detected and if present is less than the limit of detection reported
* = Value is < the laboratory limit of quantitation, but reported per WDNR guidelines (3/1/96)

1.3 = concentration > PAL

9.9 = concentration > PAL & ES

TETRA TECH

TABLE 2
SOIL CHEMISTRY - DITCH ASSESSMENT
JUNCTION CITY FUEL TERMINAL
FLINT HILLS RESOURCES, LP
JUNCTION CITY, WISCONSIN
TETRA TECH #114-340316.100

SAMPLE ID	GP-2	GP-3						NR 720 GENERIC SOIL CLEANUP STANDARDS	NR 746 RISK SCREENING STANDARDS	NR 746 DIRECT CONTACT STANDARDS
DEPTH (feet bls)	6	3								
MATRIX TYPE	clayey sand	clayey sand								
DATE SAMPLED	10/14/09	10/14/09								
PARAMETER (mg/kg)										
DRO	---	---						100[1]	---	---
								250[2]	---	---
GRO	4	<3.0						100[1]	---	---
								250[2]	---	---
PETROLEUM VOLATILE ORGANIC COMPOUNDS (PVOC)										
Benzene	<0.025	<0.025						**0.0055**	**8.5**	**1.1**
Toluene	<0.025	0.151						**1.5**	**38**	---
Ethylbenzene	<0.025	<0.025						**2.9**	**4.6**	---
Total Xylenes	<0.050	<0.050						**4.1**	**42**	---
1,3,5 Trimethylbenzene	31.4*	<0.025						---	**11**	---
1,2,4 Trimethylbenzene	38.8*	<0.025						---	**83**	---
MTBE	<0.025	<0.025						---	---	---
								---	---	---

bls = below land surface (below original grade of the dike area)

all values are in mg/kg = milligrams per kilogram (parts-per-million)

[1] standard corresponds to permeable soils (hydraulic conductivity > 10 E-6 cm/s)

[2] standard corresponds to non-permeable soils (hydraulic conductivity < 10 E-6 cm/s)

* = value is between the laboratory limit of detection and limit of quantitation but reported per WDNR guidelines dated 3/1/96

--- = No soil standard currently applicable

< = Parameter was not detected and if present, is less than the limit of detection reported

Bold = concentration > NR 720 Generic Soil Cleanup Standards

TETRA TECH, INC.

TABLE 3
GROUNDWATER CHEMISTRY - GEOPROBE BORINGS
FLINT HILLS RESOURCES, LP
JUNCTION CITY, WISCONSIN
TETRA TECH #114-340316.100

SAMPLE LOCATION	GPW-1	GPW-2	GPW-3	GPW-4	GPW-5	GPW-6					NR 140 PAL	NR 140 ES
DATE	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09						
PARAMETER												
Diesel Range Organics	-	-	-	-	-	-					NS	NS
Gasoline Range Organics	5650	858	2110	337	112	28.4*					NS	NS
VOLATILE ORGANIC COMPOUNDS												
Benzene	**1380**	**207**	**452**	**113**	*1.1*	<0.23					*0.5*	**5**
Toluene	121	1.8	8.5	1.5	<0.36	<0.36					*200*	**1,000**
Ethylbenzene	*353*	20.9	88.2	5.2	<0.40	<0.40					*140*	**700**
Xylenes	496.4	8.1	39	4.1	<0.74	<0.74					*1000*	**10,000**
Methyl-tert-butyl-ether	*12.2*	6.9	*14.1*	9.8	*16.3*	0.71*					*12*	**60**
Trimethylbenzenes[1]	*309.1*	20.6	31.3	2.5	0.55*	<0.40					*96*	**480**
1,2-Dichloroethane	-	-	-	-	-	-					*0.5*	**5**
POLYNUCLEAR AROMATIC HYDROCARBONS												
Naphthalene	-	-	-	-	-	-					*10*	**100**
Anthracene	-	-	-	-	-	-					*600*	**3,000**
Benzo(a)Pyrene	-	-	-	-	-	-					*0.02*	**0.2**
Benzo(b)fluoranthene	-	-	-	-	-	-					*0.02*	**0.2**
Chrysene	-	-	-	-	-	-					*0.02*	**0.2**
Fluoranthene	-	-	-	-	-	-					*80*	**400**
Fluorene	-	-	-	-	-	-					*80*	**400**
Pyrene	-	-	-	-	-	-					*50*	**250**
Total PAH List	-	-	-	-	-	-					NS	NS

All concentrations in ppb (ug/l)
PAL = WDNR Preventative Action Limit
ES = WDNR Enforcement Standard
[1] = Combined 1,2,4- & 1,3,5- trimethylbenzene compounds
- =Not sampled

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9.9 = concentration > PAL & ES

TETRA TECH

TABLE 2
SOIL CHEMISTRY - DITCH ASSESSMENT
JUNCTION CITY FUEL TERMINAL
FLINT HILLS RESOURCES, LP
JUNCTION CITY, WISCONSIN
TETRA TECH #114-340316.100

SAMPLE ID	GP-2	GP-3						NR 720 GENERIC SOIL CLEANUP STANDARDS	NR 746 RISK SCREENING STANDARDS	NR 746 DIRECT CONTACT STANDARDS
DEPTH (feet bls)	6	3								
MATRIX TYPE	clayey sand	clayey sand								
DATE SAMPLED	10/14/09	10/14/09								
PARAMETER (mg/kg)										
DRO	---	---						100[1]	---	---
								250[2]	---	---
GRO	4	<3.0						100[1]	---	---
								250[2]	---	---
PETROLEUM VOLATILE ORGANIC COMPOUNDS (PVOC)										
Benzene	<0.025	<0.025						**0.0055**	**8.5**	**1.1**
Toluene	<0.025	0.151						**1.5**	**38**	---
Ethylbenzene	<0.025	<0.025						**2.9**	**4.6**	---
Total Xylenes	<0.050	<0.050						**4.1**	**42**	---
1,3,5 Trimethylbenzene	0.0314*	<0.025						---	**11**	---
1,2,4 Trimethylbenzene	0.0388*	<0.025						---	**83**	---
MTBE	<0.025	<0.025						---	---	---
								---	---	---

bls = below land surface (below original grade of the dike area)

all values are in mg/kg = milligrams per kilogram (parts-per-million)

[1] standard corresponds to permeable soils (hydraulic conductivity > 10 E-6 cm/s)

[2] standard corresponds to non-permeable soils (hydraulic conductivity < 10 E-6 cm/s)

* = value is between the laboratory limit of detection and limit of quantitation but reported per WDNR guidelines dated 3/1/96

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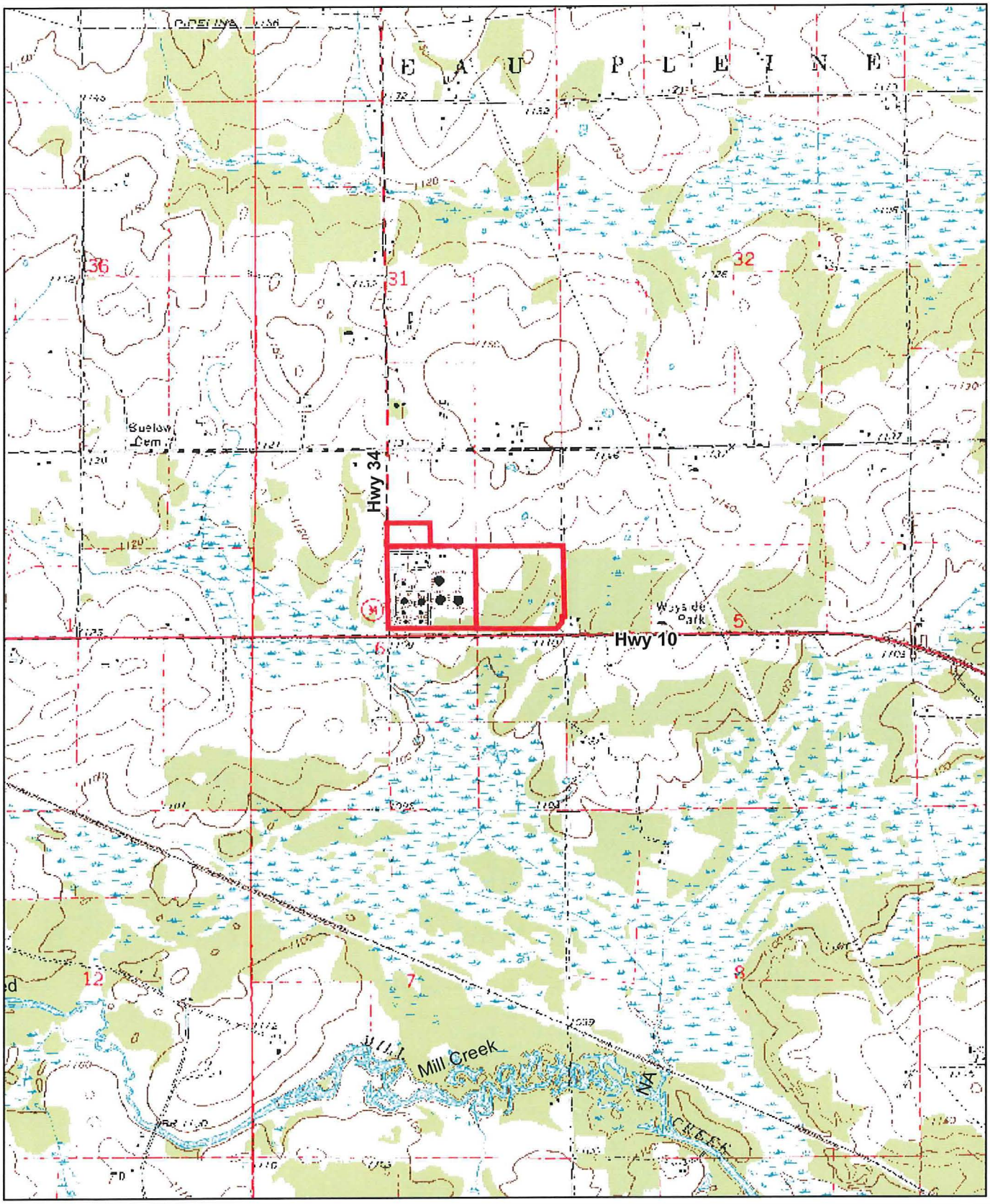
Bold = concentration > NR 720 Generic Soil Cleanup Standards



S:/gis/koch_gis/junction_city/pdf/site location

Tetra Tech Project No. 5340045.200

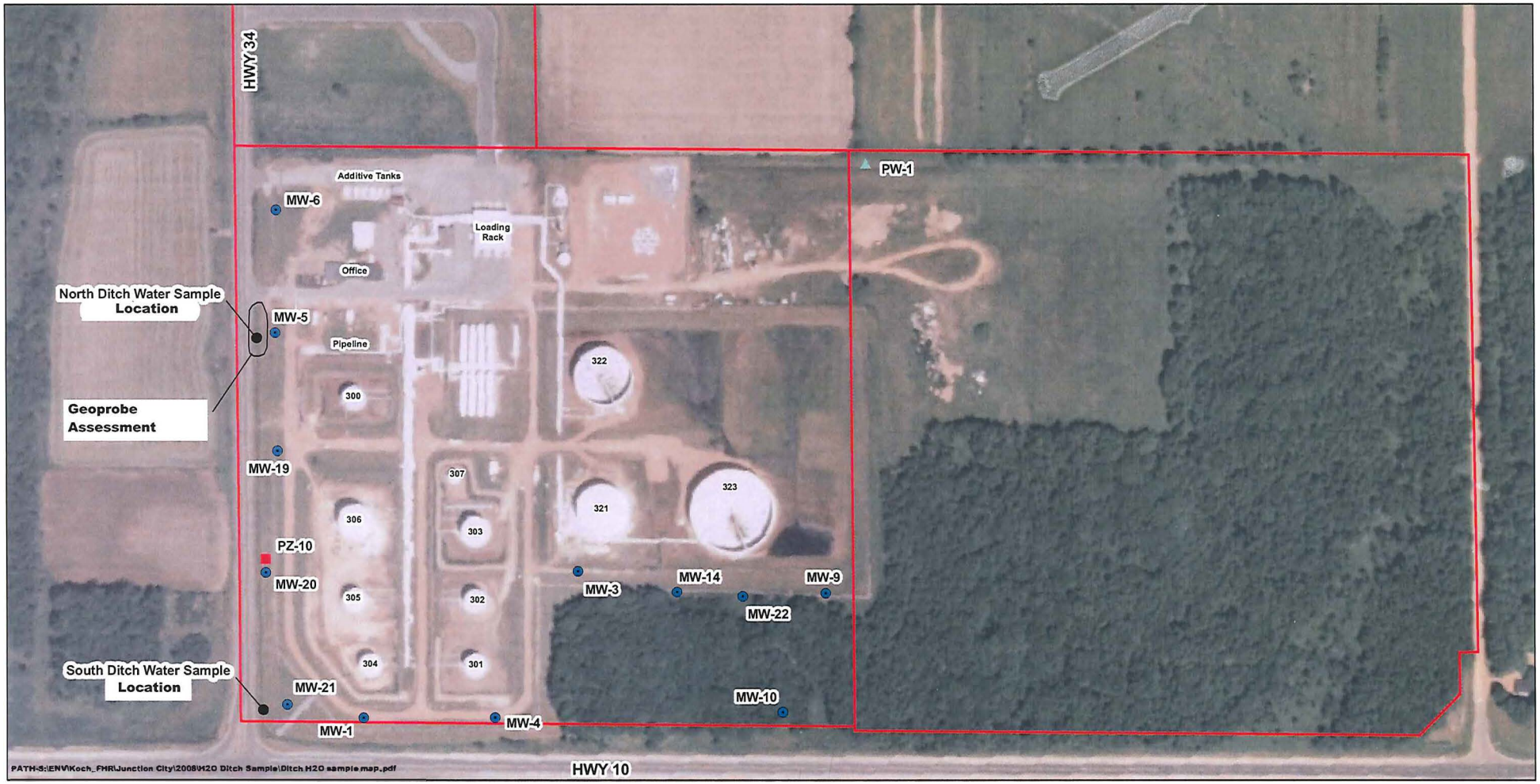
September 2007

SCALE IN FEET

0 2,000

N

Figure 1
Site Location Map
Junction City Bulk Fuel Terminal
Flint Hills Resources, LP
2267 State Highway 34
Junction City, WI 54443



2009

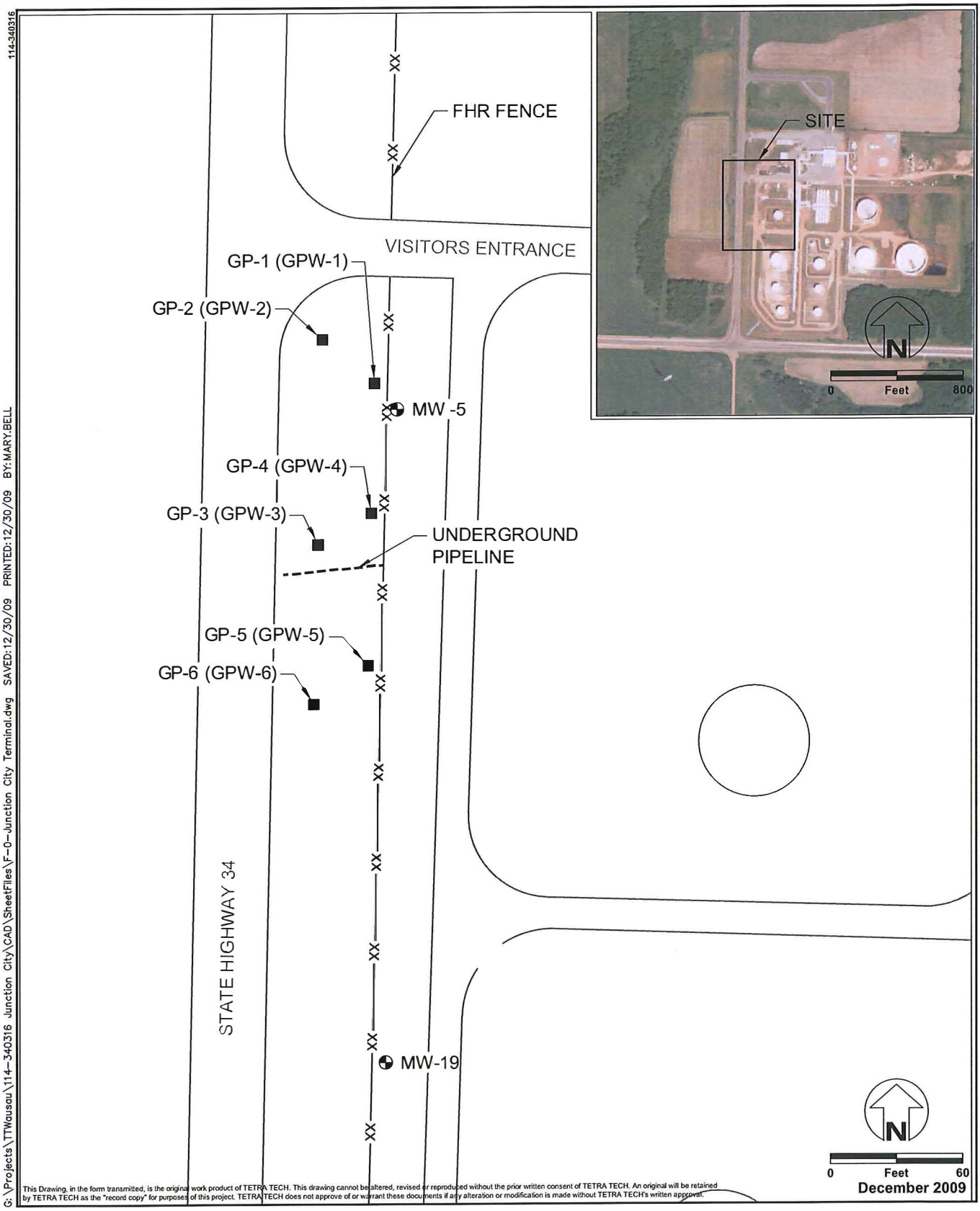
Legend

- Abandoned Well
- Active Monitoring Well
- Active Piezometer
- Potable Well
- Property Boundary

0 110 220 Feet

Figure 2

Ditch Water Sample Location Map
Junction City Fuel Terminal
Flint Hills Resources, LP
Portage County, Wisconsin



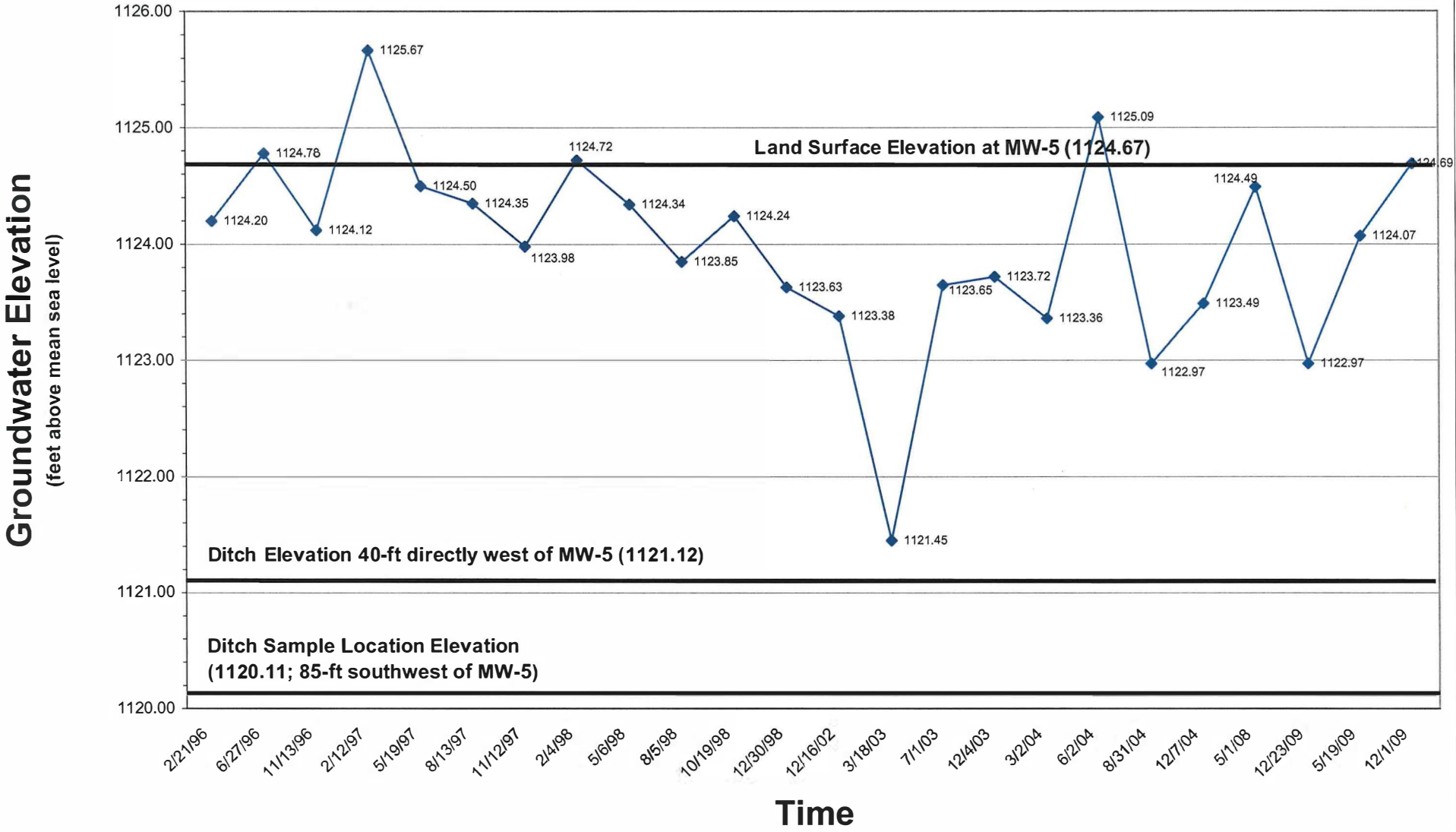
Monitoring Well Location

Geoprobe Location

Work Area Map with Geoprobe Locations
Junction City Bulk Terminal
Flint Hills Resources, LP
Junction City, Wisconsin
FIGURE 3

TETRA TECH, INC.

Figure 4
FHR Junction City Terminal
MW-5 Groundwater Elevation v. Time



APPENDIX A
SURFACE WATER
ANALYTICAL REPORTS

SIEMENS

April 28, 2008

Tetra Tech., Inc.
555 S. 72nd Ave.
Wausau, WI 54401

Attn: Greg Aldrian

REPORT NO.: 0804474 **PROJECT NO.: 5340045, FHR Junction City, Ditch Water Sam**

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received April 25, 2008.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

Siemens Water Technologies

James Salkowski
Lab Director
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature.

Approved by:

Certifications:
Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317

Siemens Water Technologies Corp.
301 West Military Road
Rothschild, WI 54474
Tel: 800-338-7226
Fax: 715-355-3221
www.enviroscan.usfilter.com

SIEMENS

SAMPLE SUMMARY

Lab Id	Client Sample Id	Date/Time	Matrix
0804474-01	Trip Blank	04/25/08 00:00	Water
0804474-02	Ditch Water Hwy 34	04/25/08 12:20	Surface Water

SIEMENS

Tetra Tech., Inc.
555 S. 72nd Ave.
Wausau, WI 54401

PROJECT NO. : 5340045, FHR Junction City, Ditch Wat
REPORT NO. : 0804474
DATE REC'D: 04/25/08 13:10
REPORT DATE : 04/28/08 09:55
PREPARED BY : JRS

Attn: Greg Aldrian

Sample ID: **Trip Blank** Matrix: **Water** Sample Date/Time: **04/25/08 0:00** Lab No. : **0804474-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B								
1,2,4-Trimethylbenzene	ND	ug/L	0.400	1.30	1		04/25/08	ALZ
1,3,5-Trimethylbenzene	ND	ug/L	0.310	1.03	1		04/25/08	ALZ
Benzene	ND	ug/L	0.310	1.00	1		04/25/08	ALZ
Ethylbenzene	ND	ug/L	0.500	1.70	1		04/25/08	ALZ
m&p-Xylene	ND	ug/L	0.620	2.10	1		04/25/08	ALZ
Methyl Tert Butyl Ether	ND	ug/L	0.300	1.00	1		04/25/08	ALZ
o-Xylene	ND	ug/L	0.360	1.20	1		04/25/08	ALZ
Toluene	ND	ug/L	0.300	1.00	1		04/25/08	ALZ

Sample ID: **Ditch Water Hwy 34** Matrix: **Surface Water** Sample Date/Time: **04/25/08 12:20** Lab No. : **0804474-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B								
1,2,4-Trimethylbenzene	7.21	ug/L	0.400	1.30	1		04/25/08	ALZ
1,3,5-Trimethylbenzene	4.03	ug/L	0.310	1.03	1		04/25/08	ALZ
Benzene	66.4	ug/L	0.310	1.00	1		04/25/08	ALZ
Ethylbenzene	11.8	ug/L	0.500	1.70	1		04/25/08	ALZ
m&p-Xylene	13.9	ug/L	0.620	2.10	1		04/25/08	ALZ
Methyl Tert Butyl Ether	3.52	ug/L	0.300	1.00	1		04/25/08	ALZ
o-Xylene	2.02	ug/L	0.360	1.20	1		04/25/08	ALZ
Toluene	2.65	ug/L	0.300	1.00	1		04/25/08	ALZ

SIEMENS

Qualifier Descriptions

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quanitation (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = picocuries per Liter
mL/L = milliliters per Liter
mg = milligram

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO, EPA 8021 and WI DNR/EPA 8260B methanol and WI DNR methylene chloride preserved

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per liter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m3 = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion(ppt)
> = Greater Than

State of Wisconsin Methanol Soils for WI GRO, WI DNR/EPA 8260B and EPA 8021 are reported to the LOQ.

SIEMENS

Company Name: TETRA TECH	Project: FHR - JUNCTION CITY - DITCH WATER SAMPLING
Report Mailing Address: 555 SOUTH 72ND AVENUE, WAUSAU, WI 54401	Contact Name, Phone, Fax, Email: GREG.ALDRIAN@TETRATECH.COM, 715.845.4100
Invoice Address: * SAME AS ABOVE *	Purchase Order #: 5340045
	Invoice Contact and Phone No.: PENNY FULLER 715.845.4100

Matrix: Drinking Water Groundwater Wastewater Soil/Solid Other: SURFACE WATER

Wis. PECFA Project subject to U&C? Yes (No)

For Compliance Monitoring? Yes No State: _____
(If Yes, please specify Agency or Regulation) Agency/Reg.: _____

Turnaround Request: [ ] Normal (10 Bus. Days)
[X] Rush (Must be pre-approved by Lab and is subject to surchages)
Date Needed: 4/29

WO No. 08004474

Lab Use Only	Sample Date	Sample Time	No. of Containers Comp	No. of Containers Grab	Sample ID	Analyses Requested: AVOCs	Comments
-01	2/26/08		✓		TRIP BLANK	X	TB - PACE Analy
-02	4/25/08	1220	✓	3	DITCH WATER HWY 34	X	

Lab Use Only

Delivered by	Walk-in		Courier
Ship. Cont. Ok?	Y	N	NA
Samples Leaking?	Y	N	NA
Seals OK?	Y	N	NA
Rec'd on Ice?	Y	N	NA

Sample Receiving Comments:

Chain of Custody Record

Relinquished By:	Date	Time	Received By:
[signature]	4/25/08	1:10PM	
	4-25-08	1310	[signature]

SIEMENS

emailed to Ross & Shawn
cc. GMA 4/30/08

April 30, 2008

Tetra Tech., Inc.
555 S. 72nd Ave.
Wausau, WI 54401

Attn: Greg Aldrian

REPORT NO.: 0804506 **PROJECT NO.: 5340045, FHR Junction City, Ditch Water Sam**

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received April 28, 2008.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

Siemens Water Technologies

James L. Salkowski

James Salkowski
Lab Director
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature.

Approved by: Cindy A Day

Certifications:
Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317

ACCREDITED IN ACCORDANCE WITH nelac

Siemens Water Technologies Corp.
301 West Military Road
Rothschild, WI 54474
Tel: 800-338-7226
Fax: 715-355-3221
www.enviroscan.usfilter.com

The total number of pages in this report, including this page is 5.

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SAMPLE SUMMARY

Lab Id	Client Sample Id	Date/Time	Matrix
0804506-01	Trip Blank	04/28/08 00:00	Water
0804506-02	Ditch Water Hwy 34, North Sample	04/28/08 14:50	Surface Water
0804506-03	Ditch Water Hwy 34, South Sample	04/28/08 15:10	Surface Water

SIEMENS

Tetra Tech., Inc.
555 S. 72nd Ave.
Wausau, WI 54401

PROJECT NO. : 5340045, FHR Junction City, Ditch Wat
REPORT NO. : 0804506
DATE REC'D: 04/28/08 16:03
REPORT DATE : 04/30/08 10:27
PREPARED BY : JRS

Attn: Greg Aldrian

Sample ID: **Trip Blank** Matrix: **Water** Sample Date/Time: **04/28/08 0:00** Lab No. : **0804506-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B								
1,2,4-Trimethylbenzene	ND	ug/L	0.400	1.30	1		04/29/08	ALZ
1,3,5-Trimethylbenzene	ND	ug/L	0.310	1.03	1		04/29/08	ALZ
Benzene	ND	ug/L	0.310	1.00	1		04/29/08	ALZ
Ethylbenzene	ND	ug/L	0.500	1.70	1		04/29/08	ALZ
m&p-Xylene	ND	ug/L	0.620	2.10	1		04/29/08	ALZ
Methyl Tert Butyl Ether	ND	ug/L	0.300	1.00	1		04/29/08	ALZ
o-Xylene	ND	ug/L	0.360	1.20	1		04/29/08	ALZ
Toluene	ND	ug/L	0.300	1.00	1		04/29/08	ALZ

Sample ID: **Ditch Water Hwy 34, North Sample** Matrix: **Surface Water** Sample Date/Time: **04/28/08 14:50** Lab No. : **0804506-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B								
1,2,4-Trimethylbenzene	2.07	ug/L	0.400	1.30	1		04/29/08	ALZ
1,3,5-Trimethylbenzene	0.594	ug/L	0.310	1.03	1	J	04/29/08	ALZ
Benzene	18.0	ug/L	0.310	1.00	1		04/29/08	ALZ
Ethylbenzene	2.96	ug/L	0.500	1.70	1		04/29/08	ALZ
m&p-Xylene	4.33	ug/L	0.620	2.10	1		04/29/08	ALZ
Methyl Tert Butyl Ether	0.918	ug/L	0.300	1.00	1	J	04/29/08	ALZ
o-Xylene	1.27	ug/L	0.360	1.20	1		04/29/08	ALZ
Toluene	1.03	ug/L	0.300	1.00	1		04/29/08	ALZ

SIEMENS

Tetra Tech., Inc.
555 S. 72nd Ave.
Wausau, WI 54401

PROJECT NO. : 5340045, FHR Junction City, Ditch Wat
REPORT NO. : 0804506
DATE REC'D: 04/28/08 16:03
REPORT DATE : 04/30/08 10:27
PREPARED BY : JRS

Attn: Greg Aldrian

Sample ID: **Ditch Water Hwy 34, South** Matrix: **Surface Water Sample** Sample Date/Time: **04/28/08 15:10** Lab No. : **0804506-03**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B								
1,2,4-Trimethylbenzene	ND	ug/L	0.400	1.30	1		04/29/08	ALZ
1,3,5-Trimethylbenzene	ND	ug/L	0.310	1.03	1		04/29/08	ALZ
Benzene	ND	ug/L	0.310	1.00	1		04/29/08	ALZ
Ethylbenzene	ND	ug/L	0.500	1.70	1		04/29/08	ALZ
m&p-Xylene	ND	ug/L	0.620	2.10	1		04/29/08	ALZ
Methyl Tert Butyl Ether	ND	ug/L	0.300	1.00	1		04/29/08	ALZ
o-Xylene	ND	ug/L	0.360	1.20	1		04/29/08	ALZ
Toluene	ND	ug/L	0.300	1.00	1		04/29/08	ALZ

SIEMENS

Qualifier Descriptions

J	Estimated concentration below laboratory quantitation level.

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quanitation (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = picocuries per Liter
mL/L = milliliters per Liter
mg = milligram

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO, EPA 8021 and WI DNR/EPA 8260B methanol and WI DNR methylene chloride preserved

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per liter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m3 = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion(ppt)
> = Greater Than

State of Wisconsin Methanol Soils for WI GRO, WI DNR/EPA 8260B and EPA 8021 are reported to the LOQ.

SIEMENS

Company Name	Project
TETRA TECH	FHR - JUNCTION CITY - DITCH WATER SAMPLING
Report Mailing Address	**Contact Name, Phone, Fax, Email**
555 S 72nd AVE WAUSAU WI 54401	GREG ALDRIAN 715-845-4100

Invoice Address	Purchase Order #	Invoice Contact and Phone No.
SAME	5340045	PENNY FULLER 715-845-4100

Matrix: Drinking Water Groundwater Wastewater Soil/Solid (Other:) SURFACE WATER

Wis. PECFA Project subject to U&C? Yes (No)

For Compliance Monitoring? Yes No State: ______
(If Yes, please specify Agency or Regulation) Agency/Reg.: ______

Turnaround Request: [ ] Normal (10 Bus. Days)
[ ] Rush (Must be pre-approved by Lab and is subject to surchages)
Date Needed: 4/30

WO No. 0804506

Analyses Requested: PVOC's

Lab Use Only

Delivered by	(Walk-in)		Courier
Ship. Cont. Ok?	(Y)	N	NA
Samples Leaking?	Y	(N)	NA
Seals OK?	(Y)	N	NA
Rec'd on Ice?	(Y)	N	NA

Sample Receiving Comments: 4°C

Lab Use Only	Sample Date	Sample Time	No. of Containers Comp	No. of Containers Grab	Sample ID	PVOC's	Comments
-1	2/26/08			2	TRIP BLANK	X	client containers - [illegible] HCl
-2	4/28/08	2:50		3	DITCH WATER HWY 34 NORTH SAMPLE	X	RUSH 3 [illegible]
-3	4/28/08	3:10		3	DITCH WATER HWY 34 SOUTH SAMPLE	X	RUSH

(handwritten margin notes: [illegible] PACE 2-26-08; Spoke to lab Alexis informed)

Chain of Custody Record

Relinquished By:	Date	Time	Received By:
[signature]	4/28/08		
	4/28/08	16:03	[signature]

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www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street
Green Bay, WI 54302
(920)469-2436

October 14, 2008

Marsha Meurette
Tetra Tech, INC.
555 South 72nd Avenue
Wausau, WI 54401

RE: Project: 5340045 FHR-JCT TERM.
Pace Project No.: 4010027

Dear Marsha Meurette:
Enclosed are the analytical results for sample(s) received by the laboratory on October 09, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

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www.pacelabs.com

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Green Bay, WI 54302
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CERTIFICATIONS

Project: 5340045 FHR-JCT TERM.
Pace Project No.: 4010027

Green Bay Certification IDs

Louisiana Certification #: 04169
Louisiana Certification #: 04168
Kentucky Certification #: 83
Kentucky Certification #: 82
Wisconsin DATCP Certification #: 105-444
Wisconsin DATCP Certification #: 105-444
Wisconsin Certification #: 405132750
Wisconsin Certification #: 405132750
South Carolina Certification #: 83006001
South Carolina Certification #: 83006001
Minnesota Certification #: 055-999-334
Minnesota Certification #: 055-999-334
North Carolina Certification #: 503
North Carolina Certification #: 503
North Dakota Certification #: R-200
North Dakota Certification #: R-150
New York Certification #: 11888
New York Certification #: 11887
Illinois Certification #: 200051
Illinois Certification #: 200050
Florida (NELAP) Certification #: E87951
Florida (NELAP) Certification #: E87948

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SAMPLE SUMMARY

Project: 5340045 FHR-JCT TERM.
Pace Project No.: 4010027

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4010027001	DITCHWATER - NORTH	Water	10/08/08 09:40	10/09/08 09:10
4010027002	DITCHWATER - SOUTH	Water	10/08/08 09:50	10/09/08 09:10
4010027003	TRIP BLANK	Water	10/08/08 00:00	10/09/08 09:10

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SAMPLE ANALYTE COUNT

Project: 5340045 FHR-JCT TERM.
Pace Project No.: 4010027

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4010027001	DITCHWATER - NORTH	TPH WI GRO/PVOC 8021	PMS	9
4010027002	DITCHWATER - SOUTH	TPH WI GRO/PVOC 8021	PMS	9
4010027003	TRIP BLANK	TPH WI GRO/PVOC 8021	PMS	9

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ANALYTICAL RESULTS

Project: 5340045 FHR-JCT TERM.
Pace Project No.: 4010027

Sample: DITCHWATER - NORTH **Lab ID: 4010027001** Collected: 10/08/08 09:40 Received: 10/09/08 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: TPH WI GRO/PVOC 8021								
Benzene	**<0.23**	ug/L	1.0	0.23	1		10/14/08 06:18	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/14/08 06:18	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		10/14/08 06:18	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		10/14/08 06:18	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		10/14/08 06:18	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/14/08 06:18	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		10/14/08 06:18	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		10/14/08 06:18	95-47-6	
a,a,a-Trifluorotoluene (S)	101	%	80-124		1		10/14/08 06:18	98-08-8	

Sample: DITCHWATER - SOUTH **Lab ID: 4010027002** Collected: 10/08/08 09:50 Received: 10/09/08 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: TPH WI GRO/PVOC 8021								
Benzene	**<0.23**	ug/L	1.0	0.23	1		10/14/08 06:44	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/14/08 06:44	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		10/14/08 06:44	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		10/14/08 06:44	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		10/14/08 06:44	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/14/08 06:44	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		10/14/08 06:44	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		10/14/08 06:44	95-47-6	
a,a,a-Trifluorotoluene (S)	99	%	80-124		1		10/14/08 06:44	98-08-8	

Sample: TRIP BLANK **Lab ID: 4010027003** Collected: 10/08/08 00:00 Received: 10/09/08 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: TPH WI GRO/PVOC 8021								
Benzene	**<0.23**	ug/L	1.0	0.23	1		10/14/08 02:30	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/14/08 02:30	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		10/14/08 02:30	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		10/14/08 02:30	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		10/14/08 02:30	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/14/08 02:30	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		10/14/08 02:30	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		10/14/08 02:30	95-47-6	
a,a,a-Trifluorotoluene (S)	99	%	80-124		1		10/14/08 02:30	98-08-8	

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(920)469-2436

QUALITY CONTROL DATA

Project: 5340045 FHR-JCT TERM.
Pace Project No.: 4010027

QC Batch: GCV/2413 Analysis Method: TPH WI GRO/PVOC 8021
QC Batch Method: TPH WI GRO/PVOC 8021 Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4010027001, 4010027002, 4010027003

METHOD BLANK: 88299 Matrix: Water
Associated Lab Samples: 4010027001, 4010027002, 4010027003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.39	1.0	10/13/08 23:06	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	10/13/08 23:06	
Benzene	ug/L	<0.23	1.0	10/13/08 23:06	
Ethylbenzene	ug/L	<0.40	1.0	10/13/08 23:06	
m&p-Xylene	ug/L	<0.74	2.0	10/13/08 23:06	
Methyl-tert-butyl ether	ug/L	<0.36	1.0	10/13/08 23:06	
o-Xylene	ug/L	<0.36	1.0	10/13/08 23:06	
Toluene	ug/L	<0.36	1.0	10/13/08 23:06	
a,a,a-Trifluorotoluene (S)	%	99	80-124	10/13/08 23:06	

LABORATORY CONTROL SAMPLE & LCSD: 88300 88301

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.0	20.0	100	100	80-120	.1	20	
1,3,5-Trimethylbenzene	ug/L	20	20.1	20.0	100	100	80-120	.5	20	
Benzene	ug/L	20	20.5	20.4	102	102	80-120	.5	20	
Ethylbenzene	ug/L	20	20.5	20.4	103	102	80-120	.5	20	
m&p-Xylene	ug/L	40	40.5	40.2	101	100	80-120	.9	20	
Methyl-tert-butyl ether	ug/L	20	19.5	19.3	97	97	80-120	.9	20	
o-Xylene	ug/L	20	20.1	20.0	101	100	80-120	.5	20	
Toluene	ug/L	20	20.7	20.5	103	102	80-120	.9	20	
a,a,a-Trifluorotoluene (S)	%				99	98	80-124			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 88302 88303

Parameter	Units	409894005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	249	200	200	435	444	93	98	36-190	2	20	
1,3,5-Trimethylbenzene	ug/L	58.0	200	200	255	265	99	103	37-199	4	20	
Benzene	ug/L	1270	200	200	1410	1440	72	85	58-141	2	20	
Ethylbenzene	ug/L	329	200	200	514	529	92	100	80-127	3	20	
m&p-Xylene	ug/L	1080	400	400	1430	1450	87	92	77-131	1	20	
Methyl-tert-butyl ether	ug/L	4.0J	200	200	184	197	90	97	80-120	7	20	
o-Xylene	ug/L	32.5	200	200	227	237	97	102	80-122	5	20	
Toluene	ug/L	47.8	200	200	243	255	97	103	80-120	5	20	
a,a,a-Trifluorotoluene (S)	%						92	95	80-124			

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QUALIFIERS

Project: 5340045 FHR-JCT TERM.
Pace Project No.: 4010027

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

Pace Analytical Services, Inc.
1241 Bellevue Street
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5340045 FHR-JCT TERM.
Pace Project No.: 4010027

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4010027001	DITCHWATER - NORTH	TPH WI GRO/PVOC 8021	GCV/2413		
4010027002	DITCHWATER - SOUTH	TPH WI GRO/PVOC 8021	GCV/2413		
4010027003	TRIP BLANK	TPH WI GRO/PVOC 8021	GCV/2413		

Sample Condition Upon Receipt

Pace Analytical

Client Name: TETRA TECH Project # 4010027

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other Dunham

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used N/A Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature RT Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: 10/9/08 KC 10/10/08

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.	
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.	
Sufficient Volume:	☑Yes ☐No ☐N/A	8.	
Correct Containers Used:	☑Yes ☐No ☐N/A	9.	
-Pace Containers Used:	☑Yes ☐No ☐N/A		
Containers Intact:	☑Yes ☐No ☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.	
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.	
-Includes date/time/ID/Analysis Matrix: W			
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.	
Trip Blank Present:	☑Yes ☐No ☐N/A	16.	
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A		
Pace Trip Blank Lot # (if purchased): _____			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 10-9-08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Tetra Tech
Branch/Location:	Wausau
Project Contact:	G Aldrian
Phone:	715-845-4100
Project Number:	5340045
Project Name:	[illegible] FHR - Dct Term.
Project State:	WI
Sampled By (Print):	Craig A Wiegman
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Greg Aldrian
Mail To Company:	Tetra Tech
Mail To Address:	SAME
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: PVOC	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N	Pick Letter				
001	NDWS - Ditch water - North	10/8/08	0940	SW	N	B	X		3-40mL	
002	SDWS - Ditchwater - South	"	0955	SW			X		↓	
003	Trip BLANK	"					X		1-40mL	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	10/8/08 1600	Dunham Express Courier	10/8/08 1600
Dunham 10/9	910	[signature]	10/9 910

PACE Project No.: 4010027

Receipt Temp = 20.4 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present

Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

November 19, 2008

Marsha Meurette
Tetra Tech, INC.
555 South 72nd Avenue
Wausau, WI 54401

RE: Project: 5340045.600 FHR-JCT DITCH PJT
Pace Project No.: 4011473

Dear Marsha Meurette:
Enclosed are the analytical results for sample(s) received by the laboratory on November 14, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 5340045.600 FHR-JCT DITCH PJT
Pace Project No.: 4011473

Green Bay Certification IDs

Louisiana Certification #: 04169
Louisiana Certification #: 04168
Kentucky Certification #: 83
Kentucky Certification #: 82
Wisconsin DATCP Certification #: 105-444
Wisconsin DATCP Certification #: 105-444
Wisconsin Certification #: 405132750
Wisconsin Certification #: 405132750
South Carolina Certification #: 83006001
South Carolina Certification #: 83006001
Minnesota Certification #: 055-999-334
Minnesota Certification #: 055-999-334
North Carolina Certification #: 503
North Carolina Certification #: 503
North Dakota Certification #: R-200
North Dakota Certification #: R-150
New York Certification #: 11888
New York Certification #: 11887
Illinois Certification #: 200051
Illinois Certification #: 200050
Florida (NELAP) Certification #: E87951
Florida (NELAP) Certification #: E87948

Pace Analytical Services, Inc.
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(920)469-2436

SAMPLE SUMMARY

Project: 5340045.600 FHR-JCT DITCH PJT
Pace Project No.: 4011473

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4011473001	DITCHWATER - NORTH	Water	11/12/08 14:00	11/14/08 09:00
4011473002	DITCHWATER - SOUTH	Water	11/12/08 14:30	11/14/08 09:00
4011473003	TRIP BLANK	Water	11/12/08 00:00	11/14/08 09:00

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SAMPLE ANALYTE COUNT

Project: 5340045.600 FHR-JCT DITCH PJT
Pace Project No.: 4011473

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4011473001	DITCHWATER - NORTH	TPH WI GRO/PVOC 8021	SES	9
4011473002	DITCHWATER - SOUTH	TPH WI GRO/PVOC 8021	SES	9
4011473003	TRIP BLANK	TPH WI GRO/PVOC 8021	SES	9

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: 5340045.600 FHR-JCT DITCH PJT
Pace Project No.: 4011473

Sample: DITCHWATER - NORTH **Lab ID: 4011473001** Collected: 11/12/08 14:00 Received: 11/14/08 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: TPH WI GRO/PVOC 8021								
Benzene	**89.3**	ug/L	1.0	0.23	1		11/18/08 08:58	71-43-2	
Ethylbenzene	**14.0**	ug/L	1.0	0.40	1		11/18/08 08:58	100-41-4	
Methyl-tert-butyl ether	**2.2**	ug/L	1.0	0.36	1		11/18/08 08:58	1634-04-4	
Toluene	**1.9**	ug/L	1.0	0.36	1		11/18/08 08:58	108-88-3	
1,2,4-Trimethylbenzene	**4.4**	ug/L	1.0	0.39	1		11/18/08 08:58	95-63-6	
1,3,5-Trimethylbenzene	**0.68J**	ug/L	1.0	0.40	1		11/18/08 08:58	108-67-8	
m&p-Xylene	**9.6**	ug/L	2.0	0.74	1		11/18/08 08:58	1330-20-7	
o-Xylene	**0.95J**	ug/L	1.0	0.36	1		11/18/08 08:58	95-47-6	
a,a,a-Trifluorotoluene (S)	100	%	80-124		1		11/18/08 08:58	98-08-8	

Sample: DITCHWATER - SOUTH **Lab ID: 4011473002** Collected: 11/12/08 14:30 Received: 11/14/08 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: TPH WI GRO/PVOC 8021								
Benzene	**<0.23**	ug/L	1.0	0.23	1		11/17/08 17:01	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		11/17/08 17:01	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		11/17/08 17:01	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		11/17/08 17:01	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		11/17/08 17:01	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		11/17/08 17:01	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		11/17/08 17:01	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		11/17/08 17:01	95-47-6	
a,a,a-Trifluorotoluene (S)	101	%	80-124		1		11/17/08 17:01	98-08-8	

Sample: TRIP BLANK **Lab ID: 4011473003** Collected: 11/12/08 00:00 Received: 11/14/08 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: TPH WI GRO/PVOC 8021								
Benzene	**<0.23**	ug/L	1.0	0.23	1		11/17/08 17:27	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		11/17/08 17:27	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		11/17/08 17:27	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		11/17/08 17:27	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		11/17/08 17:27	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		11/17/08 17:27	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		11/17/08 17:27	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		11/17/08 17:27	95-47-6	
a,a,a-Trifluorotoluene (S)	101	%	80-124		1		11/17/08 17:27	98-08-8	

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(920)469-2436

QUALITY CONTROL DATA

Project: 5340045.600 FHR-JCT DITCH PJT
Pace Project No.: 4011473

QC Batch: GCV/2630 Analysis Method: TPH WI GRO/PVOC 8021
QC Batch Method: TPH WI GRO/PVOC 8021 Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4011473001, 4011473002, 4011473003

METHOD BLANK: 102246 Matrix: Water
Associated Lab Samples: 4011473001, 4011473002, 4011473003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.39	1.0	11/17/08 11:22	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	11/17/08 11:22	
Benzene	ug/L	<0.23	1.0	11/17/08 11:22	
Ethylbenzene	ug/L	<0.40	1.0	11/17/08 11:22	
m&p-Xylene	ug/L	<0.74	2.0	11/17/08 11:22	
Methyl-tert-butyl ether	ug/L	<0.36	1.0	11/17/08 11:22	
o-Xylene	ug/L	<0.36	1.0	11/17/08 11:22	
Toluene	ug/L	<0.36	1.0	11/17/08 11:22	
a,a,a-Trifluorotoluene (S)	%	100	80-124	11/17/08 11:22	

LABORATORY CONTROL SAMPLE & LCSD: 102247 102248

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	19.7	19.9	98	99	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	20.2	20.2	101	101	80-120	.07	20	
Benzene	ug/L	20	20.5	20.4	102	102	80-120	.1	20	
Ethylbenzene	ug/L	20	20.7	20.6	103	103	80-120	.5	20	
m&p-Xylene	ug/L	40	40.9	40.5	102	101	80-120	.8	20	
Methyl-tert-butyl ether	ug/L	20	20.8	20.9	104	104	80-120	.1	20	
o-Xylene	ug/L	20	20.4	20.3	102	102	80-120	.4	20	
Toluene	ug/L	20	20.9	20.6	104	103	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				100	99	80-124			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 102340 102341

Parameter	Units	4011441005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L		4000	4000	8580	8390	106	101	36-190	2	20	
1,3,5-Trimethylbenzene	ug/L		4000	4000	5700	5560	110	106	37-199	3	20	
Benzene	ug/L		4000	4000	4250	4180	106	105	58-141	2	20	
Ethylbenzene	ug/L		4000	4000	12500	12300	107	102	80-127	2	20	
m&p-Xylene	ug/L		8000	8000	54400	53600	99	90	77-131	1	20	
Methyl-tert-butyl ether	ug/L		4000	4000	4140	4070	103	102	80-120	2	20	
o-Xylene	ug/L		4000	4000	23400	23200	98	92	80-122	1	20	
Toluene	ug/L		4000	4000	4480	4380	110	108	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%						101	100	80-124			

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(920)469-2436

QUALIFIERS

Project: 5340045.600 FHR-JCT DITCH PJT
Pace Project No.: 4011473

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

Pace Analytical Services, Inc.
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5340045.600 FHR-JCT DITCH PJT
Pace Project No.: 4011473

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4011473001	**DITCHWATER - NORTH**	TPH WI GRO/PVOC 8021	GCV/2630		
4011473002	**DITCHWATER - SOUTH**	TPH WI GRO/PVOC 8021	GCV/2630		
4011473003	**TRIP BLANK**	TPH WI GRO/PVOC 8021	GCV/2630		

Sample Condition Upon Receipt

Pace Analytical

Client Name: Tetra Tech

Project # 4011473

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Optional: Proj. Due Date: PM Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used: NA Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: R01 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: en 11/14/08

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.	
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.	
Sufficient Volume:	☑Yes ☐No ☐N/A	8.	
Correct Containers Used:	☑Yes ☐No ☐N/A	9.	
-Pace Containers Used:	☑Yes ☐No ☐N/A		
Containers Intact:	☑Yes ☐No ☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.	
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.	
-Includes date/time/ID/Analysis Matrix: S			
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.	
Trip Blank Present:	☑Yes ☐No ☐N/A	16.	
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 11-17-08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

(Please Print Clearly)

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

COC No. 026972

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Company Name:	Tetra Tech
Branch/Location:	Wausau
Project Contact:	Martha
Phone:	
Project Number:	5340045.600
Project Name:	FHR-JCT Ditch Pit
Project State:	WI
Sampled By (Print):	Tod Rasch
Sampled By (Sign):	
PO #:	
Regulatory Program:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD (billable)
☐ On your sample
☒ NOT needed on your sample

Matrix Codes
A = Air, W = Water
B = Biota, DW = Drinking Water
C = Charcoal, GW = Ground Water
O = Oil, SW = Surface Water
S = Soil, WW = Waste Water
SI = Sludge, WP = Wipe

Quote #:	
Mail To Contact:	Martha
Mail To Company:	
Mail To Address:	
Invoice To Contact:	Martha
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	B	PVOC			
001	Ditchwater - North	11/12	~~1440~~ 1500	SW		X		3-40mL		
002	Ditchwater - South	11/12	~~1430~~ 1510	↓		X		↓		
003	Trip Blank					X		1-40mL		

	Relinquished By:	Date/Time:	Received By:	Date/Time:
Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:		11/13/08 1600		
Transmit Prelim Rush Results by (complete what you want):	DUNHAM	11/14/08 900		11/14/08 900
Email #1:	Relinquished By:	Date/Time:	Received By:	Date/Time:
Email #2:				
Telephone:	Relinquished By:	Date/Time:	Received By:	Date/Time:
Fax:				
Samples on HOLD are subject to special pricing and release of liability	Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
4011473

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

ORIGINAL

C:\019a(27.Jun2006)

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

April 22, 2009

Marsha Meurette
Tetra Tech, INC.
555 South 72nd Avenue
Wausau, WI 54401

RE: Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

Dear Marsha Meurette:
Enclosed are the analytical results for sample(s) received by the laboratory on April 17, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

Green Bay Certification IDs

Wisconsin DATCP Certification #: 105-444
Wisconsin DATCP Certification #: 105-444
Wisconsin Certification #: 405132750
Wisconsin Certification #: 405132750
South Carolina Certification #: 83006001
South Carolina Certification #: 83006001
North Dakota Certification #: R-200
North Dakota Certification #: R-150
North Carolina Certification #: 503
North Carolina Certification #: 503
New York Certification #: 11887
New York Certification #: 11888
Minnesota Certification #: 055-999-334
Minnesota Certification #: 055-999-334
Louisiana Certification #: 04169
Louisiana Certification #: 04168
Kentucky Certification #: 83
Kentucky Certification #: 82
Illinois Certification #: 200051
Illinois Certification #: 200050
Florida/NELAP Certification #: E87951
Florida/NELAP Certification #: E87948

Pace Analytical Services, Inc.
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(920)469-2436

SAMPLE SUMMARY

Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4016162001	**NORTH DITCH H2O**	Water	04/16/09 14:15	04/17/09 09:30
4016162002	**SOUTH DITCH H2O**	Water	04/16/09 14:30	04/17/09 09:30
4016162003	**TRIP BLANK**	Water	04/16/09 00:00	04/17/09 09:30

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SAMPLE ANALYTE COUNT

Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4016162001	**NORTH DITCH H2O**	WI MOD GRO	PMS	9	PASI-G
4016162002	**SOUTH DITCH H2O**	WI MOD GRO	PMS	9	PASI-G
4016162003	**TRIP BLANK**	WI MOD GRO	PMS	9	PASI-G

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

Sample: NORTH DITCH H2O **Lab ID: 4016162001** Collected: 04/16/09 14:15 Received: 04/17/09 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.23**	ug/L	1.0	0.23	1		04/21/09 16:08	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/21/09 16:08	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		04/21/09 16:08	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		04/21/09 16:08	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/21/09 16:08	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/21/09 16:08	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		04/21/09 16:08	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		04/21/09 16:08	95-47-6	
a,a,a-Trifluorotoluene (S)	99	%	80-120		1		04/21/09 16:08	98-08-8	

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

Sample: SOUTH DITCH H2O **Lab ID: 4016162002** Collected: 04/16/09 14:30 Received: 04/17/09 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.23**	ug/L	1.0	0.23	1		04/21/09 16:34	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/21/09 16:34	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		04/21/09 16:34	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		04/21/09 16:34	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/21/09 16:34	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/21/09 16:34	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		04/21/09 16:34	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		04/21/09 16:34	95-47-6	
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/21/09 16:34	98-08-8	

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

Sample: TRIP BLANK **Lab ID: 4016162003** Collected: 04/16/09 00:00 Received: 04/17/09 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.23**	ug/L	1.0	0.23	1		04/21/09 16:59	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/21/09 16:59	100-41-4	
Methyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	1		04/21/09 16:59	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		04/21/09 16:59	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/21/09 16:59	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		04/21/09 16:59	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		04/21/09 16:59	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		04/21/09 16:59	95-47-6	
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/21/09 16:59	98-08-8	

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

QC Batch: GCV/3267 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4016162001, 4016162002, 4016162003

METHOD BLANK: 147897 Matrix: Water
Associated Lab Samples: 4016162001, 4016162002, 4016162003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.39	1.0	04/21/09 12:16	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	04/21/09 12:16	
Benzene	ug/L	<0.23	1.0	04/21/09 12:16	
Ethylbenzene	ug/L	<0.40	1.0	04/21/09 12:16	
m&p-Xylene	ug/L	<0.74	2.0	04/21/09 12:16	
Methyl-tert-butyl ether	ug/L	<0.36	1.0	04/21/09 12:16	
o-Xylene	ug/L	<0.36	1.0	04/21/09 12:16	
Toluene	ug/L	<0.36	1.0	04/21/09 12:16	
a,a,a-Trifluorotoluene (S)	%	100	80-120	04/21/09 12:16	

LABORATORY CONTROL SAMPLE & LCSD: 147898 147899

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	19.8	19.7	99	99	80-120	.3	20	
1,3,5-Trimethylbenzene	ug/L	20	19.8	19.9	99	100	80-120	.7	20	
Benzene	ug/L	20	19.6	19.6	98	98	80-120	.2	20	
Ethylbenzene	ug/L	20	19.4	19.4	97	97	80-120	.1	20	
m&p-Xylene	ug/L	40	38.6	38.8	96	97	80-120	.5	20	
Methyl-tert-butyl ether	ug/L	20	20.2	20.1	101	101	80-120	.5	20	
o-Xylene	ug/L	20	19.4	19.5	97	97	80-120	.4	20	
Toluene	ug/L	20	19.6	19.5	98	98	80-120	.4	20	
a,a,a-Trifluorotoluene (S)	%				100	99	80-120			

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: GCV/3267

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-340136.100 FHR-JCT DITCH
Pace Project No.: 4016162

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4016162001	**NORTH DITCH H2O**	WI MOD GRO	GCV/3267		
4016162002	**SOUTH DITCH H2O**	WI MOD GRO	GCV/3267		
4016162003	**TRIP BLANK**	WI MOD GRO	GCV/3267		

Sample Condition Upon Receipt

Pace Analytical

Client Name: Tetra Tech Project # 40116162

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals Intact: ☒ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: NA Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: WOL Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: cl 4/17/09

Chain of Custody Present:	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☒Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☒Yes	☐No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☒No	☐N/A	7.
Sufficient Volume:	☒Yes	☐No	☐N/A	8.
Correct Containers Used:	☒Yes	☐No	☐N/A	9.
-Pace Containers Used:	☒Yes	☐No	☐N/A	
Containers Intact:	☒Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11.
Sample Labels match COC:	☒Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked.	☐Yes	☐No	☒N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☒N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☐No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☒No	☐N/A	15.
Trip Blank Present:	☒Yes	☐No	☐N/A	16.
Trip Blank Custody Seals Present	☒Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased): _____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 4-17-09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Tetra Tech
Branch/Location:	Wausau WI
Project Contact:	M Meurette
Phone:	715-845-4100
Project Number:	114-340136.100
Project Name:	FHR-JCT Ditch H_2O
Project State:	WI Project
Sampled By (Print):	Casey Wiemann
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	M. Meurette
Mail To Company:	Tetra Tech
Mail To Address:	555 S. 72nd Ave Wausau WI
Invoice To Contact:	M. Meurette
Invoice To Company:	SAME
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☑ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
Sl = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PVOC	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	North Ditch H_2O	4-16-09	1415	SW	N	B	X		3-40ml *	
002	South Ditch H_2O	4-16-09	1430	SW			X		↓	
003	Trip Blank						X		1-40ml	

Trip Blank

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	4-16-09 1700	Durham Fexpress	4-16-09
	4/17/09 9:30		4/17/09 9:30 1700

PACE Project No. 4016162

Receipt Temp = NOT °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 8.0 06/14/08

C019a(27Jun2006)

ORIGINAL

APPENDIX B
PROJECT PHOTO LOG

TETRA TECH

APPENDIX B
PROJECT PHOTO LOG
DITCH ASSESSMENT
TETRA TECH #114-340316.100

1.) Looking south from south entrance of FHR Junction City Terminal. Ditch regraded, seeded and covered for stabilization. STH "34" east shoulder work still in progress

2.) Looking south from south entrance/exit drive of FHR Junction City Terminal. Ditch grading completed with STH "34" construction in progress.

TETRA TECH

APPENDIX B
PROJECT PHOTO LOG
DITCH ASSESSMENT
TETRA TECH #114-340316.100

3.) Looking North from STH "10" and STH "34" intersection. Regrading and stabilization completed. Dike discharge drainage reconstruction completed on southwest corner of site with STH "34" construction in progress.

4.) Looking North across STH "10" at reconstructed ditch on West side of FHR Junction City Terminal. STH "34" construction in progress.

TETRA TECH

APPENDIX B
PROJECT PHOTO LOG
DITCH ASSESSMENT
TETRA TECH #114-340316.100

5.) Looking south from south entrance drive at ditch on west site of FHR Junction City Terminal on April, 25, 2008 during surface water sampling event.

6.) Surface water accumulation in Ditch on west side of FHR Junction. Terminal on prior to sampling event on April 25, 2008.

TETRA TECH

APPENDIX B
PROJECT PHOTO LOG
DITCH ASSESSMENT
TETRA TECH #114-340316.100

7.) "North" ditch sampling location at FHR Junction City Terminal west side on April 25, 2008.

APPENDIX C
METHODS AND PROCEDURES

TETRA TECH

APPENDIX C
METHODS AND PROCEDURES
STH 34 DITCH ASSESSMENT
TETRA TECH #114-341316.100

Geoprobe Soil Borings

Soil probe borings were advanced and temporary water table monitoring points were installed by SGS, Inc. using a truck-mounted Geoprobe® unit. The probes were advanced using a 1" sampler 4 feet in length. Each probe was continuously sampled with soil samples retrieved in 4-foot long Teflon sleeves until reaching the prescribed borehole depth, boring refusal, or groundwater. Soil samples were composited at 2-foot intervals and prepared for field screening and/or laboratory submittal. Boreholes were backfilled with bentonite chips in accordance with WDNR requirements. Remnant soil cuttings were placed in a 55 gallon drum at the facility used for interim storage of materials associated with their operations waste stream. Samples of this material were submitted for waste characterization purposes and disposed of in accordance with regulatory requirements

Soil Screening

The soils were screened with a MiniRae PID equipped with an 10.2 eV lamp and calibrated for direct reading in ppm of total organic vapors using an isobutylene standard. A self-sealing plastic bag (Zip-Loc type) was filled with the sample and tightly sealed. Headspace was then allowed to equilibrate based on the following field conditions:

Ambient Outside Temperature At Time of Sample Collection	Minimum Amount of Time Air Sample Must Equilibrate at 70°F or Greater Temperature*
< 40 °F	40 min
40 – 55 °F	20 min
54 – 69 °F	10 min
> 70 °F	5 min

* Headspace samples were warmed out of direct sunlight by bringing them into a heated environment. At temperatures less than 55°F, headspace sample equilibration time can be reduced to 10 minutes through the use of a 70°F water bath. Following equilibration, an organic vapor reading was collected by partially opening the bag's seal and inserting the instrument probe into the headspace.

Sampling and Chain of Custody

Soil samples were collected using laboratory prepared sample jars. Weighed soil samples were placed in the pre-tared jars and preservative added as per analytical requirements or placed in the jar with zero headspace. All samples collected were cooled during field activities and en route to the laboratory by storing them on ice in a portable cooler, with as few people as possible handled the samples. Upon completion of the sampling procedure, a chain of custody log was initiated.

Water samples were collected from the borehole/temporary well employing a peristaltic pump with dedicated tubing. Surface water samples were obtained employing a clean sampling vessel to make the initial collection and transferring it to the laboratory prepared sampling container. Lab sample containers (including preservative, if warranted) included prepared 40-ml glass vials and/or 1-liter glass bottles.

All samples collected were cooled during field activities and en route to the laboratory by storing them on ice in a portable cooler. Upon completion of the sampling procedure, a chain of custody log was initiated.

The chain of custody record includes the following information: project name, work order number, shipped by, shipped to, sampling point, location, field ID number, date and time taken, sample type, number of containers, analysis required, sampler(s) signature (s), etc. Ambient air temperature, sample condition inside of shipping/travel container was also recorded upon receipt at laboratory or recorded as "shipped on ice".

Analytical Procedures

Analytical procedures may have included one or more of the following methodologies for soil samples:

ANALYTICAL PROCEDURES - SOIL	
Wisconsin Modified DRO	Diesel Range Organics (DRO)
Wisconsin Modified GRO	Gasoline Range Organics (GRO)
EPA Methodology SW846-5030B / 8021	Petroleum Volatile Organic Compounds (PVOC) + Naphthalene

APPENDIX D
SOIL BORING LOGS

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Flint Hill Resources, LP-Junction City Terminal		GP-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Jeff Annis Geiss Soils and Sampling, LLC	10/13/2009	10/13/2009	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of NE 1/4 of Section 6, T 24 N, R 7 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Portage	50	Junction City

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SP	48 48		1	Clayey Sand, TILL, with a trace of gravel, mottled brown and yellowish brown, moist	SC			0						
			2											
			3											
2 SP	48 48		4				▼	0						
			5											
			6	Clayey Sand, TILL, with cobbles and rock fragments, brown, moist	SC									
			7											
			8	END OF BORING				0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm Tetra Tech, Inc
555 South 72nd Avenue Wausau, WI 54401
Tel: 715.845.4100
Fax: 715.842.0381

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Flint Hill Resources, LP-Junction City Terminal		GP-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Jeff Annis Geiss Soils and Sampling, LLC	10/13/2009	10/13/2009	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of NE 1/4 of Section 6, T 24 N, R 7 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Portage	50	Junction City

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SP	48 48		0	Silty Clayey Sand, FILL, black brown moist, grass-covered										
			1	Clayey Sand, TILL, brown, moist to water bearing	SC			10.1						
			2											
			3	Clayey Sand, TILL, grayish-brown, water bearing			▼							
2 SP	48 48		4		SC									
			5											
			6	Clay, TILL, with a trace of sand, rock fragments and cobbles, brown				85						
			7		SC									
3 SP	0 0		8	END OF BORING				0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
Robert G. Pomroglo	Tetra Tech, Inc 555 South 72nd Avenue Wausau, WI 54401	Tel: 715.845.4100 Fax: 715.842.0381

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Flint Hill Resources. LP-Junction City Terminal		GP-3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Jeff Annis Geiss Soils and Sampling, LLC	10/13/2009	10/13/2009	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of NE 1/4 of Section 6, T 24 N, R 7 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Portage	50	Junction City

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SP	48 48		0	Silty Clayey Sand, FILL, black brown moist, grass-covered										
			1	Clayey Sand, TILL, black, moist	SC									
			2											
			3	Clayey Sand, TILL, with a trace of gravel, brown, moist	SC			2561						
2 SP	48 48		4	Clay, TILL, with a trace of gravel, brown, moist	CL									
			5											
			6	Sand, TILL, with clay, rock fragments and a trace of gravel, brown	SC		▼	163						
			7											
			8	END OF BORING										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm Tetra Tech, Inc 555 South 72nd Avenue Wausau, WI 54401 Tel: 715.845.4100 Fax: 715.842.0381

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Flint Hill Resources, LP-Junction City Terminal		GP-4

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Jeff Annis Geiss Soils and Sampling, LLC	10/13/2009	10/13/2009	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of NE 1/4 of Section 6, T 24 N, R 7 E

Lat ___° ___' ___"
Long ___° ___' ___"

Local Grid Location
☐ N ☐ E
Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Portage	50	Junction City

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SP	48 48		0	Silty Clayey Sand, FILL, black-brown, moist				0						
			1	Sand, TILL, with clay and a trace of gravel, brown, moist	SC									
			2											
			3											
2 SP	48 40		4	Sand, TILL, with clay and gravel, brown, moist	SC		▼	0						
			5											
			6											
			7	Weathered bedrock fragments										
			8	END OF BORING				0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm Tetra Tech, Inc Tel: 715.845.4100
555 South 72nd Avenue Wausau, WI 54401 Fax: 715.842.0381

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Flint Hill Resources, LP-Junction City Terminal		GP-5

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Jeff Annis Geiss Soils and Sampling, LLC	10/13/2009	10/13/2009	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of NE 1/4 of Section 6, T 24 N, R 7 E

Lat ___ ° ___ ' ___ "
Long ___ ° ___ ' ___ "

Local Grid Location
☐ N ☐ E
Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Portage	50	Junction City

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SP	48 48		0	Silty Clayey Sand, FILL, black-brown, moist				0						
			1	Clayey Sand, TILL, with a trace of gravel, brown, moist										
			2											
			3											
			4		SC									
2 SP	48 38							0						
			5											
			6											
			7				▼							
				Weathered bedrock fragments										
			8											
				END OF BORING				0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel:
	Tetra Tech, Inc 555 South 72nd Avenue Wausau, WI 54401	715.845.4100 Fax: 715.842.0381

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Flint Hill Resources, LP-Junction City Terminal		GP-6

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Jeff Annis Geiss Soils and Sampling, LLC	10/13/2009	10/13/2009	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SW 1/4 of NE 1/4 of Section 6, T 24 N, R 7 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Portage	50	Junction City

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SP	48 48		1	Silty Clayey Sand, FILL, black-brown, moist				0						
			2	Clayey Sand, TILL, with a trace of gravel, brown, moist	SC									
			3											
			4											
2 SP	48 48		5	Clay, TILL, with a trace of sand and gravel, brown, moist				0						
			6		SC									
			7											
			8				▼							
3 SP	12 4			Weathered bedrock fragments				0						
				END OF BORING										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm Tetra Tech, Inc Tel: 715.845.4100
555 South 72nd Avenue Wausau, WI 54401 Fax: 715.842.0381

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

APPENDIX E
SOIL AND GROUNDWATER ANALYTICAL REPORT

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

October 22, 2009

Marsha Meurette
Tetra Tech, INC.
555 South 72nd Avenue
Wausau, WI 54401

RE: Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Dear Marsha Meurette:
Enclosed are the analytical results for sample(s) received by the laboratory on October 15, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Green Bay Certification IDs

California Certification #: 09268CA
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Kentucky Certification #: 83
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11887
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

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SAMPLE SUMMARY

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4024021001	GPW-1	Water	10/13/09 10:20	10/15/09 09:20
4024021002	GP-2 @-6FT	Solid	10/13/09 10:45	10/15/09 09:20
4024021003	GPW-2	Water	10/13/09 10:55	10/15/09 09:20
4024021004	GP-3 @-3FT.	Solid	10/13/09 11:20	10/15/09 09:20
4024021005	GPW-3	Water	10/13/09 11:30	10/15/09 09:20
4024021006	GPW-4	Water	10/13/09 13:15	10/15/09 09:20
4024021007	GPW-5	Water	10/13/09 13:10	10/15/09 09:20
4024021008	GPW-6	Water	10/13/09 14:10	10/15/09 09:20
4024021009	DITCH WATER	Water	10/13/09 13:15	10/15/09 09:20
4024021010	MEOH BLANK	Solid	10/13/09 14:00	10/15/09 09:20

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SAMPLE ANALYTE COUNT

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4024021001	GPW-1	WI MOD GRO	PMS	10	PASI-G
4024021002	GP-2 @-6FT	ASTM D2974-87	AG	1	PASI-G
		WI MOD GRO	PMS	10	PASI-G
4024021003	GPW-2	WI MOD GRO	PMS	10	PASI-G
4024021004	GP-3 @-3FT.	ASTM D2974-87	AG	1	PASI-G
		WI MOD GRO	PMS	10	PASI-G
4024021005	GPW-3	WI MOD GRO	PMS	10	PASI-G
4024021006	GPW-4	WI MOD GRO	PMS	10	PASI-G
4024021007	GPW-5	WI MOD GRO	PMS	10	PASI-G
4024021008	GPW-6	WI MOD GRO	PMS	10	PASI-G
4024021009	DITCH WATER	WI MOD GRO	PMS	10	PASI-G
4024021010	MEOH BLANK	WI MOD GRO	PMS	10	PASI-G

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: GPW-1 **Lab ID: 4024021001** Collected: 10/13/09 10:20 Received: 10/15/09 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**1380**	ug/L	10.0	2.3	10		10/16/09 14:42	71-43-2	M0
Ethylbenzene	**353**	ug/L	10.0	4.0	10		10/16/09 14:42	100-41-4	
Gasoline Range Organics	**5650**	ug/L	500	262	10		10/16/09 14:42		
Methyl-tert-butyl ether	**12.2**	ug/L	10.0	3.6	10		10/16/09 14:42	1634-04-4	
Toluene	**121**	ug/L	10.0	3.6	10		10/16/09 14:42	108-88-3	
1,2,4-Trimethylbenzene	**225**	ug/L	10.0	3.9	10		10/16/09 14:42	95-63-6	
1,3,5-Trimethylbenzene	**84.1**	ug/L	10.0	4.0	10		10/16/09 14:42	108-67-8	
m&p-Xylene	**409**	ug/L	20.0	7.4	10		10/16/09 14:42	1330-20-7	
o-Xylene	**87.4**	ug/L	10.0	3.6	10		10/16/09 14:42	95-47-6	
a,a,a-Trifluorotoluene (S)	93	%	80-120		10		10/16/09 14:42	98-08-8	

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: GP-2 @-6FT **Lab ID: 4024021002** Collected: 10/13/09 10:45 Received: 10/15/09 09:20 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:11	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:11	100-41-4	W
Gasoline Range Organics	**4.0**	mg/kg	2.9	2.9	1	10/21/09 10:54	10/22/09 00:11		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:11	1634-04-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:11	108-88-3	W
1,2,4-Trimethylbenzene	**38.8J**	ug/kg	68.9	28.7	1	10/21/09 10:54	10/22/09 00:11	95-63-6	Z2
1,3,5-Trimethylbenzene	**31.4J**	ug/kg	68.9	28.7	1	10/21/09 10:54	10/22/09 00:11	108-67-8	Z2
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/21/09 10:54	10/22/09 00:11	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:11	95-47-6	W
a,a,a-Trifluorotoluene (S)	96	%	80-120		1	10/21/09 10:54	10/22/09 00:11	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**13.0**	%	0.10	0.10	1		10/21/09 08:26		

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: GPW-2 **Lab ID: 4024021003** Collected: 10/13/09 10:55 Received: 10/15/09 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**207**	ug/L	1.0	0.23	1		10/16/09 18:59	71-43-2	
Ethylbenzene	**20.9**	ug/L	1.0	0.40	1		10/16/09 18:59	100-41-4	
Gasoline Range Organics	**858**	ug/L	50.0	26.2	1		10/16/09 18:59		HS
Methyl-tert-butyl ether	**6.9**	ug/L	1.0	0.36	1		10/16/09 18:59	1634-04-4	
Toluene	**1.8**	ug/L	1.0	0.36	1		10/16/09 18:59	108-88-3	
1,2,4-Trimethylbenzene	**12.4**	ug/L	1.0	0.39	1		10/16/09 18:59	95-63-6	
1,3,5-Trimethylbenzene	**8.2**	ug/L	1.0	0.40	1		10/16/09 18:59	108-67-8	
m&p-Xylene	**6.7**	ug/L	2.0	0.74	1		10/16/09 18:59	1330-20-7	
o-Xylene	**1.4**	ug/L	1.0	0.36	1		10/16/09 18:59	95-47-6	
a,a,a-Trifluorotoluene (S)	95	%	80-120		1		10/16/09 18:59	98-08-8	HS

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: GP-3 @-3FT. **Lab ID: 4024021004** Collected: 10/13/09 11:20 Received: 10/15/09 09:20 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:37	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:37	100-41-4	W
Gasoline Range Organics	**<3.0**	mg/kg	3.0	3.0	1	10/21/09 10:54	10/22/09 00:37		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:37	1634-04-4	W
Toluene	**151**	ug/kg	72.2	30.1	1	10/21/09 10:54	10/22/09 00:37	108-88-3	Z2
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:37	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:37	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/21/09 10:54	10/22/09 00:37	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 00:37	95-47-6	W
a,a,a-Trifluorotoluene (S)	95	%	80-120		1	10/21/09 10:54	10/22/09 00:37	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.9**	%	0.10	0.10	1		10/21/09 08:26		

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: GPW-3 **Lab ID: 4024021005** Collected: 10/13/09 11:30 Received: 10/15/09 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**452**	ug/L	2.5	0.57	2.5		10/16/09 19:25	71-43-2	
Ethylbenzene	**88.2**	ug/L	2.5	1.0	2.5		10/16/09 19:25	100-41-4	
Gasoline Range Organics	**2110**	ug/L	125	65.5	2.5		10/16/09 19:25		
Methyl-tert-butyl ether	**14.4**	ug/L	2.5	0.90	2.5		10/16/09 19:25	1634-04-4	
Toluene	**8.5**	ug/L	2.5	0.89	2.5		10/16/09 19:25	108-88-3	
1,2,4-Trimethylbenzene	**21.9**	ug/L	2.5	0.98	2.5		10/16/09 19:25	95-63-6	
1,3,5-Trimethylbenzene	**9.4**	ug/L	2.5	0.99	2.5		10/16/09 19:25	108-67-8	
m&p-Xylene	**35.2**	ug/L	5.0	1.9	2.5		10/16/09 19:25	1330-20-7	
o-Xylene	**3.8**	ug/L	2.5	0.90	2.5		10/16/09 19:25	95-47-6	
a,a,a-Trifluorotoluene (S)	94	%	80-120		2.5		10/16/09 19:25	98-08-8	

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: **GPW-4** Lab ID: **4024021006** Collected: 10/13/09 13:15 Received: 10/15/09 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**113**	ug/L	1.0	0.23	1		10/16/09 19:51	71-43-2	
Ethylbenzene	**5.2**	ug/L	1.0	0.40	1		10/16/09 19:51	100-41-4	
Gasoline Range Organics	**337**	ug/L	50.0	26.2	1		10/16/09 19:51		
Methyl-tert-butyl ether	**9.8**	ug/L	1.0	0.36	1		10/16/09 19:51	1634-04-4	
Toluene	**1.5**	ug/L	1.0	0.36	1		10/16/09 19:51	108-88-3	
1,2,4-Trimethylbenzene	**2.0**	ug/L	1.0	0.39	1		10/16/09 19:51	95-63-6	
1,3,5-Trimethylbenzene	**0.49J**	ug/L	1.0	0.40	1		10/16/09 19:51	108-67-8	
m&p-Xylene	**3.5**	ug/L	2.0	0.74	1		10/16/09 19:51	1330-20-7	
o-Xylene	**0.59J**	ug/L	1.0	0.36	1		10/16/09 19:51	95-47-6	
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		10/16/09 19:51	98-08-8	

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: GPW-5 Lab ID: **4024021007** Collected: 10/13/09 13:10 Received: 10/15/09 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**1.1**	ug/L	1.0	0.23	1		10/19/09 11:22	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/19/09 11:22	100-41-4	
Gasoline Range Organics	**112**	ug/L	50.0	26.2	1		10/19/09 11:22		
Methyl-tert-butyl ether	**16.3**	ug/L	1.0	0.36	1		10/19/09 11:22	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		10/19/09 11:22	108-88-3	
1,2,4-Trimethylbenzene	**0.55J**	ug/L	1.0	0.39	1		10/19/09 11:22	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/19/09 11:22	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		10/19/09 11:22	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		10/19/09 11:22	95-47-6	
a,a,a-Trifluorotoluene (S)	97	%	80-120		1		10/19/09 11:22	98-08-8	

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: GPW-6 Lab ID: **4024021008** Collected: 10/13/09 14:10 Received: 10/15/09 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.23**	ug/L	1.0	0.23	1		10/16/09 20:42	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/16/09 20:42	100-41-4	
Gasoline Range Organics	**28.4J**	ug/L	50.0	26.2	1		10/16/09 20:42		
Methyl-tert-butyl ether	**0.71J**	ug/L	1.0	0.36	1		10/16/09 20:42	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		10/16/09 20:42	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		10/16/09 20:42	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/16/09 20:42	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		10/16/09 20:42	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		10/16/09 20:42	95-47-6	
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		10/16/09 20:42	98-08-8	

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: DITCH WATER **Lab ID: 4024021009** Collected: 10/13/09 13:15 Received: 10/15/09 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.23**	ug/L	1.0	0.23	1		10/16/09 21:08	71-43-2	
Ethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/16/09 21:08	100-41-4	
Gasoline Range Organics	**<26.2**	ug/L	50.0	26.2	1		10/16/09 21:08		
Methyl-tert-butyl ether	**0.38J**	ug/L	1.0	0.36	1		10/16/09 21:08	1634-04-4	
Toluene	**<0.36**	ug/L	1.0	0.36	1		10/16/09 21:08	108-88-3	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	1.0	0.39	1		10/16/09 21:08	95-63-6	
1,3,5-Trimethylbenzene	**<0.40**	ug/L	1.0	0.40	1		10/16/09 21:08	108-67-8	
m&p-Xylene	**<0.74**	ug/L	2.0	0.74	1		10/16/09 21:08	1330-20-7	
o-Xylene	**<0.36**	ug/L	1.0	0.36	1		10/16/09 21:08	95-47-6	
a,a,a-Trifluorotoluene (S)	95	%	80-120		1		10/16/09 21:08	98-08-8	

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ANALYTICAL RESULTS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Sample: MEOH BLANK **Lab ID: 4024021010** Collected: 10/13/09 14:00 Received: 10/15/09 09:20 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 01:03	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 01:03	100-41-4	W
Gasoline Range Organics	**<2.5**	mg/kg	2.5	2.5	1	10/21/09 10:54	10/22/09 01:03		
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 01:03	1634-04-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 01:03	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 01:03	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 01:03	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/21/09 10:54	10/22/09 01:03	1330-20-7	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/21/09 10:54	10/22/09 01:03	95-47-6	W
a,a,a-Trifluorotoluene (S)	95	%	80-120		1	10/21/09 10:54	10/22/09 01:03	98-08-8	

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QUALITY CONTROL DATA

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

QC Batch: GCV/4145 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4024021001, 4024021003, 4024021005, 4024021006, 4024021007, 4024021008, 4024021009

METHOD BLANK: 221843 Matrix: Water
Associated Lab Samples: 4024021001, 4024021003, 4024021005, 4024021006, 4024021007, 4024021008, 4024021009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.39	1.0	10/16/09 12:59	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	10/16/09 12:59	
Benzene	ug/L	<0.23	1.0	10/16/09 12:59	
Ethylbenzene	ug/L	<0.40	1.0	10/16/09 12:59	
Gasoline Range Organics	ug/L	<26.2	50.0	10/16/09 12:59	
m&p-Xylene	ug/L	<0.74	2.0	10/16/09 12:59	
Methyl-tert-butyl ether	ug/L	<0.36	1.0	10/16/09 12:59	
o-Xylene	ug/L	<0.36	1.0	10/16/09 12:59	
Toluene	ug/L	<0.36	1.0	10/16/09 12:59	
a,a,a-Trifluorotoluene (S)	%	96	80-120	10/16/09 12:59	

LABORATORY CONTROL SAMPLE & LCSD: 221844 221845

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	18.3	18.1	92	91	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	18.8	19.1	94	95	80-120	1	20	
Benzene	ug/L	20	18.9	18.9	95	94	80-120	.3	20	
Ethylbenzene	ug/L	20	18.2	18.3	91	91	80-120	.2	20	
Gasoline Range Organics	ug/L	200	200	202	100	101	80-120	.7	20	
m&p-Xylene	ug/L	40	36.8	37.1	92	93	80-120	.8	20	
Methyl-tert-butyl ether	ug/L	20	20.0	19.4	100	97	80-120	3	20	
o-Xylene	ug/L	20	18.4	18.7	92	94	80-120	2	20	
Toluene	ug/L	20	18.8	18.7	94	93	80-120	.4	20	
a,a,a-Trifluorotoluene (S)	%				96	96	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 221953 221954

Parameter	Units	4024021001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	225	200	200	445	456	110	116	19-186	3	20	
1,3,5-Trimethylbenzene	ug/L	84.1	200	200	289	296	103	106	64-142	2	20	
Benzene	ug/L	1380	200	200	1690	1730	156	173	28-167	2	20	M0
Ethylbenzene	ug/L	353	200	200	581	592	114	120	51-151	2	20	
m&p-Xylene	ug/L	409	400	400	831	848	106	110	23-175	2	20	
Methyl-tert-butyl ether	ug/L	12.2	200	200	198	209	93	98	77-120	5	20	
o-Xylene	ug/L	87.4	200	200	285	291	99	102	40-154	2	20	
Toluene	ug/L	121	200	200	323	329	101	104	54-151	2	20	
a,a,a-Trifluorotoluene (S)	%						91	91	80-120			

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QUALITY CONTROL DATA

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

QC Batch: PMST/3207
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 4024021002, 4024021004

SAMPLE DUPLICATE: 223460

Parameter	Units	4024016007 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	41.0	37.4	9	10	

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QUALITY CONTROL DATA

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

QC Batch: GCV/4175 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 4024021002, 4024021004, 4024021010

METHOD BLANK: 223870 Matrix: Solid
Associated Lab Samples: 4024021002, 4024021004, 4024021010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	10/21/09 16:03	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	10/21/09 16:03	
Benzene	ug/kg	<25.0	60.0	10/21/09 16:03	
Ethylbenzene	ug/kg	<25.0	60.0	10/21/09 16:03	
Gasoline Range Organics	mg/kg	<2.5	2.5	10/21/09 16:03	
m&p-Xylene	ug/kg	<50.0	120	10/21/09 16:03	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	10/21/09 16:03	
o-Xylene	ug/kg	<25.0	60.0	10/21/09 16:03	
Toluene	ug/kg	<25.0	60.0	10/21/09 16:03	
a,a,a-Trifluorotoluene (S)	%	97	80-120	10/21/09 16:03	

LABORATORY CONTROL SAMPLE & LCSD: 223871 223872

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	970	1020	97	102	80-120	5	20	
1,3,5-Trimethylbenzene	ug/kg	1000	965	1010	96	101	80-120	5	20	
Benzene	ug/kg	1000	890	918	89	92	80-120	3	20	
Ethylbenzene	ug/kg	1000	930	965	93	96	80-120	4	20	
Gasoline Range Organics	mg/kg	10	9.4	9.7	94	97	80-120	4	20	
m&p-Xylene	ug/kg	2000	1900	1990	95	99	80-120	5	20	
Methyl-tert-butyl ether	ug/kg	1000	844	838	84	84	80-120	.8	20	
o-Xylene	ug/kg	1000	947	990	95	99	80-120	4	20	
Toluene	ug/kg	1000	921	957	92	96	80-120	4	20	
a,a,a-Trifluorotoluene (S)	%				96	96	80-120			

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QUALIFIERS

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

HS	Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
W	Non-detect results are reported on a wet weight basis.
Z2	Analyte present in the associated method blank above the detection limit.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 114-340316.100 HWY 34 DITCH
Pace Project No.: 4024021

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4024021001	GPW-1	WI MOD GRO	GCV/4145		
4024021003	GPW-2	WI MOD GRO	GCV/4145		
4024021005	GPW-3	WI MOD GRO	GCV/4145		
4024021006	GPW-4	WI MOD GRO	GCV/4145		
4024021007	GPW-5	WI MOD GRO	GCV/4145		
4024021008	GPW-6	WI MOD GRO	GCV/4145		
4024021009	DITCH WATER	WI MOD GRO	GCV/4145		
4024021002	GP-2 @-6FT	ASTM D2974-87	PMST/3207		
4024021004	GP-3 @-3FT.	ASTM D2974-87	PMST/3207		
4024021002	GP-2 @-6FT	TPH GRO/PVOC WI ext.	GCV/4175	WI MOD GRO	GCV/4176
4024021004	GP-3 @-3FT.	TPH GRO/PVOC WI ext.	GCV/4175	WI MOD GRO	GCV/4176
4024021010	MEOH BLANK	TPH GRO/PVOC WI ext.	GCV/4175	WI MOD GRO	GCV/4176

Sample Condition Upon Receipt

Pace Analytical

Client Name: Tetra Tech Project # 4024021

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None Other

Thermometer Used N/A Type of Ice: Wet Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature _____ Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Optional: Proj. Due Date: Proj. Name:

Person examining contents: Date: 10/15/09 Initials: [illegible]

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W/S	☐Yes ☐No ☐N/A	12. * 002/004 Soil * 001/003/005-009 W
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	Initial when completed: [illegible] Lot # of added preservative:
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☑Yes ☐No ☐N/A	15. 2-40ml for -003
Trip Blank Present:	☐Yes ☐No ☐N/A	16. Mesh Blank
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: * Lot of sediment in Vials for -001, -003, -005, & -006

Project Manager Review: [signature] **Date:** 10-15-09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of 1

4024021

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	TETRA TECH, INC. (TT)
Branch/Location:	WAUSAU, WI
Project Contact:	GREG ADRIAN
Phone:	715.845.4100
Project Number:	114-380316.100
Project Name:	HWY 34 DITCH INVEST.
Project State:	WI
Sampled By (Print):	TOM NORMINGTON
Sampled By (Sign):	Thomas R. Norrington
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	GREG.ADRIAN@TETRATECH.COM
Mail To Company:	TT
Mail To Address:	555 SOUTH 72ND AVE WAUSAU, WI 54401
Invoice To Contact:	KATHY PARMAN
Invoice To Company:	
Invoice To Address:	SAME AS * MAIL TO*
Invoice To Phone:	715.845.4100

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analysis Requested: GRO/PVOC SOIL	GRO/PVOC WATER	% MOISTURE	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	F						
					N	B						
					N	A						
001	GPW-1	10/13/09	1020	GW				3			3-40mL[B]	
002	GP-2 @ -6 FT	10/13/09	1045	S	1				1		4oz poly, 2oz[F]	
003	GPW-2 ~~@ -6 FT.~~ TW 10/14	10/13/09	1055	GW				2			2-40mL[B]	
004	GP-3 @ -3 FT.	10/13/09	1120	S	1				1		4oz poly, 2oz[F]	
005	GPW-3	10/13/09	1130	GW				3			3-40mL[B]	
006	GPW-4	10/13/09	1:15	GW				3			↓	
007	GPW-5	10/13/09	1:10	GW				3			↓	
008	GPW-6	10/13/09	2:10	GW				2			2-40mL[B]	
009	DITCH WATER	10/13/09	1:15	GW				3			3-40mL[B]	
010	MEOH BLANK	10/13/09	2:00	F	1						1-40mL[F]	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Thomas R. Norrington	10/14/09 @ 3:30	DHL	10/14/09 @ 3:30
Dunham	10/15/09 920		10/15/09 920

PACE Project No.: 4024021

Receipt Temp = N/A °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal: Present / Not Present, Intact / Not Intact

Version 6.0 06/14/08

C019a(27Jun2006)

ORIGINAL

APPENDIX F
BOREHOLE ABANDONMENT FORMS

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ■ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Portage

Common Well Name: GP-1 | Gov't Lot (if applicable):

Grid Location: SW 1/4 of NE 1/4 of Sec. 6 ; T. 24 N; R. 7 ☐ E ☐ W

_____ ft. ☐ N. ■ S., _____ ft. ☐ E. ■ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ° ' " Long ° ' "

State Plane _____ ft. N. _____ ft. E. ☐ S ☐ C ☐ N Zone

Reason For Abandonment: Borhole no longer needed

WI Unique Well No. of Replacement Well:

(2) FACILITY/OWNER INFORMATION

Facility Name: Flint Hill Resources, LP-Junction City Terminal

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2267 Highway 34 North

City, Village, or Town: Junction City

Present Well Owner | Original Owner

Street Address or Route of Owner: 2267 Highway 34 North

City, State, Zip Code: Junction City, WI 54443

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 10/13/2009

☐ Monitoring Well
☐ Water Well
■ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:

☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
■ Other (Specify) Geoprobe

Formation Type:

■ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface)

Casing Diameter (in.) _____

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown

If Yes, To What Depth? _____ Feet

Depth to Water (Feet): 5.0

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	■ Not Applicable
Liner(s) Removed?	■ Yes	☐ No	☐ Not Applicable
Screen Removed?	■ Yes	☐ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	■ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	■ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	■ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material

☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain)

Sealing Materials

☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only

☐ Bentonite Chips
■ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Native Soil	Surface	1.0		
Benseal	1.0	8.0	0.25	

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: Tetra Tech, Inc. | Date of Abandonment: 10/13/09

Signature of Person Doing Work | Date Signed: 12/21/2009

Street or Route: 555 S 72nd Ave | Telephone Number: 715/845-4100

City, State, Zip Code: Wausau, Wi 54401

FOR DNR OR COUNTY USE ONLY

Date Received | Noted By

Comments

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1

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Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ■ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Portage

Common Well Name: GP-2 | Gov't Lot (if applicable):

Grid Location: SW 1/4 of NE 1/4 of Sec. 6 ; T. 24 N; R. 7 ☐ E ☐ W

_____ ft. ☐ N. ■ S., _____ ft. ☐ E. ■ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ° ' " Long ° ' " or

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: Borhole no longer needed | WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: Flint Hill Resources, LP-Junction City Terminal

Facility ID | License/Permit/Monitoring No.:

Street Address of Well: 2267 Highway 34 North

City, Village, or Town: Junction City

Present Well Owner | Original Owner:

Street Address or Route of Owner: 2267 Highway 34 North

City, State, Zip Code: Junction City, WI 54443

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 10/13/2009

☐ Monitoring Well
☐ Water Well
■ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:

☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
■ Other (Specify) Geoprobe

Formation Type:

■ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface) Casing Diameter (in.) _____

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown

If Yes, To What Depth? _____ Feet

Depth to Water (Feet) 4.0

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	■ Not Applicable
Liner(s) Removed?	■ Yes	☐ No	☐ Not Applicable
Screen Removed?	■ Yes	☐ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	■ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	■ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	■ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material

☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured ☐ Other (Explain)
(Bentonite Chips)

Sealing Materials

☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only

☐ Bentonite Chips
■ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Native Soil	Surface	1.0		
Benseal	1.0	8.0	0.25	

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: Tetra Tech, Inc. | Date of Abandonment: 10/13/09

Signature of Person Doing Work | Date Signed: 12/21/2009

Street or Route: 555 S 72nd Ave | Telephone Number: 715/845-4100

City, State, Zip Code: Wausau, Wi 54401

FOR DNR OR COUNTY USE ONLY

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State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1

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Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ■ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Portage

Common Well Name: GP-3 | Gov't Lot (if applicable):

Grid Location: SW 1/4 of NE 1/4 of Sec. 6 ; T. 24 N; R. 7 ☐ E ☐ W

_____ ft. ☐ N. ■ S., _____ ft. ☐ E. ■ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ° ' " Long ° ' " or

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: Borhole no longer needed | WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: Flint Hill Resources, LP-Junction City Terminal

Facility ID | License/Permit/Monitoring No.:

Street Address of Well: 2267 Highway 34 North

City, Village, or Town: Junction City

Present Well Owner | Original Owner:

Street Address or Route of Owner: 2267 Highway 34 North

City, State, Zip Code: Junction City, WI 54443

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 10/13/2009

☐ Monitoring Well
☐ Water Well
■ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:

☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
■ Other (Specify) Geoprobe

Formation Type:

■ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface) Casing Diameter (in.) _____

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown

If Yes, To What Depth? _____ Feet

Depth to Water (Feet) 7.0

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	■ Not Applicable
Liner(s) Removed?	■ Yes	☐ No	☐ Not Applicable
Screen Removed?	■ Yes	☐ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	■ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	■ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	■ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material

☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured ☐ Other (Explain)
(Bentonite Chips)

Sealing Materials

☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only

☐ Bentonite Chips
■ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Native Soil	Surface	1.0		
Benseal	1.0	8.0	0.25	

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: Tetra Tech, Inc. | Date of Abandonment: 10/13/09

Signature of Person Doing Work: [signature] | Date Signed: 12/21/2009

Street or Route: 555 S 72nd Ave | Telephone Number: 715/845-4100

City, State, Zip Code: Wausau, WI 54401

FOR DNR OR COUNTY USE ONLY

Date Received | Noted By

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State of Wisconsin
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WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1

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Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ■ Remediation/Redevelopment ☐ Other _____

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Portage

Common Well Name: GP-4 Gov't Lot (if applicable)

Grid Location: SW 1/4 of NE 1/4 of Sec. 6 ; T. 24 N; R. 7 ☐ E ☐ W

_____ ft. ☐ N. ■ S., _____ ft. ☐ E. ■ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ____ ° ____ ' ____ " Long ____ ° ____ ' ____ " or

State Plane _____ ft. N. _____ ft. E. ☐ S ☐ C ☐ N Zone

Reason For Abandonment: Borhole no longer needed

WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: Flint Hill Resources, LP-Junction City Terminal

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2267 Highway 34 North

City, Village, or Town: Junction City

Present Well Owner | Original Owner

Street Address or Route of Owner: 2267 Highway 34 North

City, State, Zip Code: Junction City, WI 54443

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 10/13/2009

☐ Monitoring Well
☐ Water Well
■ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:

☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
■ Other (Specify) Geoprobe

Formation Type:

■ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____
Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

Depth to Water (Feet): 7.0

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	■ Not Applicable
Liner(s) Removed?	■ Yes	☐ No	☐ Not Applicable
Screen Removed?	■ Yes	☐ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	■ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	■ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	■ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material

☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured ☐ Other (Explain)
(Bentonite Chips)

Sealing Materials

☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only

☐ Bentonite Chips
■ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Native Soil	Surface	1.0		
Benseal	1.0	8.0	0.25	

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: Tetra Tech, Inc.

Date of Abandonment: 10/13/09

Signature of Person Doing Work: [signature]

Date Signed: 12/21/2009

Street or Route: 555 S 72nd Ave

Telephone Number: 715/845-4100

City, State, Zip Code: Wausau, Wi 54401

FOR DNR OR COUNTY USE ONLY

Date Received | Noted By

Comments

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
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Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ■ Remediation/Redevelopment ☐ Other

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Portage

Common Well Name: GP-5 Gov't Lot (if applicable)

Grid Location: SW 1/4 of NE 1/4 of Sec. 6 ; T. 24 N; R. 7 ☐ E ☐ W

_____ ft. ☐ N. ■ S., _____ ft. ☐ E. ■ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ____ ° ____ ' ____ " Long ____ ° ____ ' ____ " or

State Plane _____ ft. N. _____ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: Borhole no longer needed | WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: Flint Hill Resources, LP-Junction City Terminal

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2267 Highway 34 North

City, Village, or Town: Junction City

Present Well Owner | Original Owner

Street Address or Route of Owner: 2267 Highway 34 North

City, State, Zip Code: Junction City, WI 54443

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 10/13/2009

☐ Monitoring Well
☐ Water Well
■ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
■ Other (Specify) Geoprobe

Formation Type:
■ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface) Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown

If Yes, To What Depth? _____ Feet

Depth to Water (Feet) 7.0

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	■ Not Applicable
Liner(s) Removed?	■ Yes	☐ No	☐ Not Applicable
Screen Removed?	■ Yes	☐ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	■ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	■ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	■ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain)

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Chips
■ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Native Soil	Surface	1.0		
Benseal	1.0	8.0	0.25	

(6) Comments

(7) Name of Person or Firm Doing Sealing Work: Tetra Tech, Inc. | Date of Abandonment: 10/13/09

Signature of Person Doing Work | Date Signed: 12/21/2009

Street or Route: 555 S 72nd Ave | Telephone Number: 715/845-4100

City, State, Zip Code: Wausau, Wi 54401

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WELL/DRILLHOLE/BOREHOLE ABANDONMENT
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Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ■ Remediation/Redevelopment ☐ Other

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Portage

Common Well Name: GP-6 Gov't Lot (if applicable)

Grid Location: SW 1/4 of NE 1/4 of Sec. 6 ; T. 24 N; R. 7 ☐ E ☐ W

_____ ft. ☐ N. ■ S., _____ ft. ☐ E. ■ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ____ ° ____ ' ____ " Long ____ ° ____ ' ____ " or

State Plane _____ ft. N. _____ ft. E. ☐ S ☐ C ☐ N Zone

Reason For Abandonment: Borhole no longer needed | WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: Flint Hill Resources, LP-Junction City Terminal

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 2267 Highway 34 North

City, Village, or Town: Junction City

Present Well Owner | Original Owner

Street Address or Route of Owner: 2267 Highway 34 North

City, State, Zip Code: Junction City, WI 54443

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 10/13/2009

☐ Monitoring Well
☐ Water Well
■ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:

☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
■ Other (Specify) Geoprobe

Formation Type:

■ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) _____ (From ground surface) Casing Diameter (in.) _____

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown

If Yes, To What Depth? _____ Feet

Depth to Water (Feet) 8.0

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	■ Not Applicable
Liner(s) Removed?	■ Yes	☐ No	☐ Not Applicable
Screen Removed?	■ Yes	☐ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	■ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	■ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	■ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material

☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain)

Sealing Materials

☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only

☐ Bentonite Chips
■ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Native Soil	Surface	1.0		
Benseal	1.0	9.0	0.25	

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: Tetra Tech, Inc. | Date of Abandonment: 10/13/09

Signature of Person Doing Work: [signature] | Date Signed: 21st Dec 2009

Street or Route: 555 S 72nd Ave | Telephone Number: 715/845-4100

City, State, Zip Code: Wausau, Wi 54401

FOR DNR OR COUNTY USE ONLY

Date Received | Noted By

Comments

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Scott Humrickhouse, Regional Director

Wausau Office
5301 Rib Mountain Drive
Wausau, Wisconsin 54401
Telephone 715-359-4522
FAX 715-355-5253
TTY Access via relay - 711

June 22, 2009

BRRTS #02-50-553760

FILE COPY

MS TERRIE BLACKBURN
FLINT HILLS RESOURCES LP
TERMINAL OPERATIONS
4111 EAST 37TH STREET NORTH
WICHITA KS 67220

RE: Flint Hill Resources – Junction City Terminal
Ditch Line Release
2267 State Highway 34
Junction City, Wisconsin

Dear Ms. Blackburn:

Thank you for contacting me this morning to discuss recent changes in personnel at Flint Hill Resources and the status of the projects at the Junction City Terminal. It is my understanding that there will be additional work completed in the ditch area on the west side of the property.

As I explained to you, this ditch line case was originally opened as a spill case. Typically spill cases are releases to the environment that are addressed immediately with no further follow up. These cases are typically closed with a "No Further Action" letter under s.NR708.09 Wisconsin Administrative Code or when they become a long-term case.

When additional investigation and/or remedial actions are needed to address the release, the cases become long-term. At that time the spills identification number (BRRTS #) is closed out and the case is assigned another BRRTS # indicating it is no longer a spill. In your case the spills number 04-50-551431 was closed out and 02-50-553760 was assigned to the case. Please make sure that all future correspondence references the BRRTS number. This case will be closed out under s.726 Wis. Adm. Code.

Please remember that even though the Department may not review a case at every stage in the investigation and cleanup, you are still required by the Spills Law (Wisconsin Statute 292.11) to take the steps necessary to restore the environment to the extent practicable. If you want a formal response from the agency on a specific submittal, please be aware that a review fee is required in accordance with ch. NR 749, Wis. Adm. Code. Fees are listed at the following website http://www.legis.state.wi.us/rsb/code/nr/nr749.pdf.

Please contact me at 715-359-6514 if you have any questions regarding this letter. We appreciate the steps you have taken to date to address the environmental contamination at the site.

Sincerely,

Lisa Gutknecht

Lisa Gutknecht
Remediation & Redevelopment Program

c: Bill Evans – DNR, Eau Claire
Greg Aldrian, TetraTech

Gutknecht, Lisa A - DNR

From: Blackburn, Terrie [Terrie.Blackburn@fhr.com]
Sent: Monday, June 22, 2009 12:35 PM
To: Gutknecht, Lisa A - DNR
Subject: RE: FHR-Junction City Terminal, Tank 300 Dike Area Regrading Project

Flint Hills Resources, LP
Terminal Operations
4111 East 37th Street North
Wichita, Kansas 67220

From: Gutknecht, Lisa A - DNR [mailto:Lisa.Gutknecht@Wisconsin.gov]
Sent: Monday,June 22,2009 11:38 AM
To: Blackburn, Terrie
Subject: RE: FHR-Junction City Terminal, Tank 300 Dike Area Regrading Project

Terrie,

Thank you for the update this morning and for checking on the stockpiled material at the Junction City Terminal. Would you please provide me with your mailing address for the letter that I will be sending regarding the ditch release. Thank you.

Lisa Gutknecht
Wausau Service Center
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, WI 54401
(☎) phone: (715) 359-6514
(☎) fax: (715) 355-5253
(✉) e-mail: Lisa.Gutknecht@Wisconsin.gov

From: Blackburn, Terrie [mailto:Terrie.Blackburn@fhr.com]
Sent: Monday, June 22, 2009 10:31 AM
To: Gutknecht, Lisa A - DNR
Cc: Meurette, Marsha; Stubbe, Brad
Subject: FHR-Junction City Terminal, Tank 300 Dike Area Regrading Project

Lisa,

Thank you for speaking with me regarding our recent staff changes and the Tank 300 outstanding questions. As I mentioned, Ross Hubbard has taken a new position within FHR and Shawn Marion has transitioned to managing our Stevens Point Asphalt Facility. Brad Stubbe is now the Terminal Manager for Junction City and I will now be your primary contact for any WI remediation related matters that you may have been working with Ross.

Tank 300 outstanding questions:

1. The clay liner thickness was 2 feet, per the contractor.

2. The soil removed from the dike area was field screen, found to clean, stockpiled in a clean soil lay down area, covered and has remained there since the work was completed. There are no current plans to use the soil and it remains covered.

It was nice to meet you and please let me know if you have any further questions.

Terrie Blackburn
Compliance Director
Flint Hills Resources, LP
EH&S - Terminals Group
316-828-8509 office
terrie.blackburn@fhr.com

Gutknecht, Lisa A - DNR

From: Norquist, Elizabeth A - DNR
Sent: Monday, June 22, 2009 11:12 AM
To: Gutknecht, Lisa A - DNR
Subject: Flint Hills Ditch Line 02-50-553760

Lisa,
Here is your new ERP for the Flint Hills Ditch Line 02-50-553760.
The spill and the ERP will be crossed referenced.
Let me know if you need anything else.
Beth

Ditch Spill
04-50-551431

SIEMENS

April 28, 2008

Tetra Tech., Inc.
555 S. 72nd Ave.
Wausau, WI 54401

Attn: Greg Aldrian

REPORT NO.: 0804474 **PROJECT NO.: 5340045, FHR Junction City, Ditch Water Sam**

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received April 25, 2008.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

Siemens Water Technologies

James Salkowski
Lab Director
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature.

Approved by:

Certifications:
Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317

Siemens Water Technologies Corp.
301 West Military Road
Rothschild, WI 54474
Tel: 800-338-7226
Fax: 715-355-3221
www.enviroscan.usfilter.com

The total number of pages in this report, including this page is 4.

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SAMPLE SUMMARY

Lab Id	Client Sample Id	Date/Time	Matrix
0804474-01	Trip Blank	04/25/08 00:00	Water
0804474-02	Ditch Water Hwy 34	04/25/08 12:20	Surface Water

SIEMENS

Tetra Tech., Inc.
555 S. 72nd Ave.
Wausau, WI 54401

Attn: Greg Aldrian

PROJECT NO. : 5340045, FHR Junction City, Ditch Wat
REPORT NO. : 0804474
DATE REC'D: 04/25/08 13:10
REPORT DATE : 04/28/08 09:55
PREPARED BY : JRS

Sample ID: **Trip Blank** Matrix: **Water** Sample Date/Time: **04/25/08 0:00** Lab No. : **0804474-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B								
1,2,4-Trimethylbenzene	ND	ug/L	0.400	1.30	1		04/25/08	ALZ
1,3,5-Trimethylbenzene	ND	ug/L	0.310	1.03	1		04/25/08	ALZ
Benzene	ND	ug/L	0.310	1.00	1		04/25/08	ALZ
Ethylbenzene	ND	ug/L	0.500	1.70	1		04/25/08	ALZ
m&p-Xylene	ND	ug/L	0.620	2.10	1		04/25/08	ALZ
Methyl Tert Butyl Ether	ND	ug/L	0.300	1.00	1		04/25/08	ALZ
o-Xylene	ND	ug/L	0.360	1.20	1		04/25/08	ALZ
Toluene	ND	ug/L	0.300	1.00	1		04/25/08	ALZ

Sample ID: **Ditch Water Hwy 34** Matrix: **Surface Water** Sample Date/Time: **04/25/08 12:20** Lab No. : **0804474-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B								
1,2,4-Trimethylbenzene	7.21	ug/L	0.400	1.30	1		04/25/08	ALZ
1,3,5-Trimethylbenzene	4.03	ug/L	0.310	1.03	1		04/25/08	ALZ
Benzene	66.4	ug/L	0.310	1.00	1		04/25/08	ALZ
Ethylbenzene	11.8	ug/L	0.500	1.70	1		04/25/08	ALZ
m&p-Xylene	13.9	ug/L	0.620	2.10	1		04/25/08	ALZ
Methyl Tert Butyl Ether	3.52	ug/L	0.300	1.00	1		04/25/08	ALZ
o-Xylene	2.02	ug/L	0.360	1.20	1		04/25/08	ALZ
Toluene	2.65	ug/L	0.300	1.00	1		04/25/08	ALZ

SIEMENS

Qualifier Descriptions

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quanitation (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = picocuries per Liter
mL/L = milliliters per Liter
mg = milligram

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO, EPA 8021 and WI DNR/EPA 8260B methanol and WI DNR methylene chloride preserved

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per liter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m3 = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion(ppt)
> = Greater Than

State of Wisconsin Methanol Soils for WI GRO, WI DNR/EPA 8260B and EPA 8021 are reported to the LOQ.

SIEMENS

Company Name	Project
TETRA TECH	FHR - JUNCTION CITY - DITCH WATER SAMPLING
Report Mailing Address	**Contact Name, Phone, Fax, Email**
555 SOUTH 72ND AVENUE WAUSAU, WI 54401	GREG.ALDRIAN@TETRATECH.COM 715.845.4100
Invoice Address	**Purchase Order #** / **Invoice Contact and Phone No.**
* SAME AS ABOVE *	5340045 / PENNY FULLER 715.845.4100

Matrix: Drinking Water Groundwater Wastewater Soil/Solid (Other) SURFACE WATER

Wis. PECFA Project subject to U&C? Yes (No)

For Compliance Monitoring? Yes No State: _____
(If Yes, please specify Agency or Regulation) Agency/Reg.: _____

Turnaround Request: [ ] Normal (10 Bus. Days)
[X] Rush (Must be pre-approved by Lab and is subject to surchages)
Date Needed: 4/29

WO No. 0804474

Lab Use Only

Delivered by: (Walk-in) Courier
Ship. Cont. Ok? (Y) N NA
Samples Leaking? Y (N) NA
Seals OK? (Y) N NA
Rec'd on Ice? (Y) N NA
Sample Receiving Comments:

Lab Use Only	Sample Date	Sample Time	No. of Containers Comp	No. of Containers Grab	Sample ID	Analyses Requested: PVOCs	Comments
-01	2/26/08		—		TRIP BLANK	X	TB-Pace Analy
-02	4/25/08	1220	—	3	DITCH WATER HWY 34	X	

Chain of Custody Record

Relinquished By:	Date	Time	Received By:
[signature]	4/25/08	1:10PM	
	4-25-08	1310	[signature]

TETRA TECH, INC.

TABLE 2
GROUNDWATER CHEMISTRY
FLINT HILLS RESOURCES PINE BEND, LLC
JUNCTION CITY, WISCONSIN
TETRA TECH #114-340570

SAMPLE LOCATION	MW-5								NR 140 PAL	NR 140 ES
DATE	5/1/08	12/23/08	5/19/09	12/1/09	5/27/10	11/24/10	2/17/11	8/24/11		
PARAMETER										
Diesel Range Organics	790	2600	2400	1800	1960	1880	1340	1520	NS	NS
Gasoline Range Organics	8990	11700	8090	8910	7400	7350	7290	10300	NS	NS
VOLATILE ORGANIC COMPOUNDS										
Benzene	**1780**	**2410**	**1800**	**1520**	**1970**	**1290**	**1690**	**1830**	*0.5*	**5**
Toluene	*472*	*681*	*524*	*436*	*479*	*234*	*276*	*465*	*160*	**800**
Ethylbenzene	*514*	**764**	*574*	*622*	*640*	*484*	*581*	*650*	*140*	**700**
Xylenes	*1085*	*1510*	*1079*	*1086*	*1241*	866	*1032*	1276	*400*	**2,000**
Methyl-tert-butyl-ether	*<15.2*	<6.1	*<12.2*	*<12.2*	*<12.2*	*<12.2*	<6.1	*<12.2*	*12*	**60**
Trimethylbenzenes[1]	*459.7*	**641**	*395.4*	**514**	**547**	*447.7*	**507**	**514**	*96*	**480**
1,2-Dichloroethane	<9.0	<0.36	<7.2	<7.2	<7.2	<7.2	<3.6	<7.2	*0.5*	**5**
POLYNUCLEAR AROMATIC HYDROCARBONS										
Naphthalene	*73.2*	*80.5*	*67.2*	*98.2*	*49.7*	*43.7*	**106**	**111**	*10*	**100**
Anthracene	<0.65	<1.3	<0.13	<0.30	<0.58	<0.72	<0.12	0.21*	*600*	**3,000**
Benzo(a)Pyrene	<0.54	<1.1	*<0.11*	*<0.15*	<0.29	<0.36	<0.059	<0.058	*0.02*	**0.2**
Benzo(b)fluoranthene	<0.51	<1.0	*<0.10*	*<0.18*	<0.35	<0.55	<0.090	<0.088	*0.02*	**0.2**
Chrysene	<0.70	<1.4	*<0.14*	*<0.18*	<0.35	<0.44	<0.072	<0.070	*0.02*	**0.2**
Fluoranthene	<0.53	<1.1	<0.11	<0.23	<0.45	<0.55	<0.091	<0.089	*80*	**400**
Fluorene	0.91*	<1.3	0.93*	1.3*	0.94*	<0.60	1.4	1.8	*80*	**400**
Pyrene	<0.68	<1.4	<0.14	<0.25	<0.48	<0.59	<0.098	<0.096	*50*	**250**
Total PAH List	132.11	130.7	68.13	99.5	81.26	68.7	179.3	182.37	NS	NS

All concentrations in ppb (ug/l)
PAL = WDNR Preventative Action Limit
ES = WDNR Enforcement Standard
[1] = Combined 1,2,4- & 1,3,5- trimethylbenzene compounds

NS = No applicable standard
< = Parameter was not detected and if present is less than the limit of detection reported
* = Value is < the laboratory limit of quantitation, but reported per WDNR guidelines (3/1/96)

1.3 = concentration > PAL

9.9 = concentration > PAL & ES

TETRA TECH